American Cinematographer

THE MOTION PICTURE CAMERA MAGAZINE

May
1942

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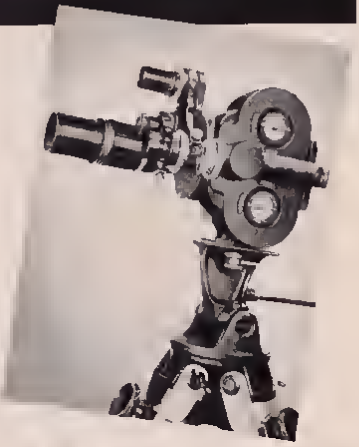

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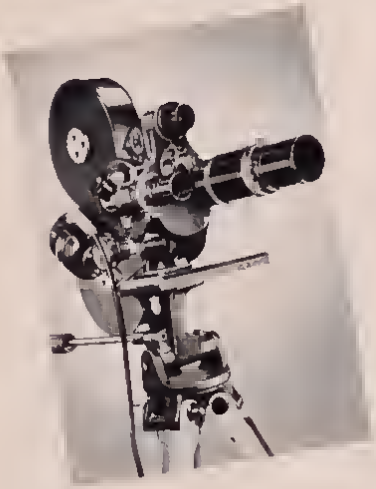

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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 23 MAY, 1942 NO. 5

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The Front Cover

This month's cover photo was made while the Editor of this magazine, with members of the Long Beach Cinema Club, was making a test of the new Auricon 16mm. sound-camera. The "actors" include Clarence Aldrich, Val Pope and Ray Fosholdt, respectively photographers and director of the Long Beach Club's Defense Picture. Walter Bach is seen "mixing" the sound, while Karl Freund, A.S.C., is an interested spectator. Photo by Harold O'Neal.

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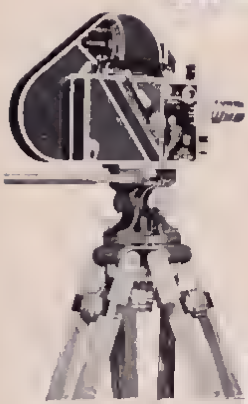
"PROFESSIONAL JR." TRIPOD



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FIELD HINTS FOR MILITARY CINEMATOGRAPHERS

By CLYDE DE VINNA, A.S.C.

ONE of the chief tasks faced by the rapidly expanding motion picture sections of our Army, Navy and Marine Corps is bound to be that of making motion picture records of actual operations on the many fronts throughout the world where our forces are or will be engaged. The technical problems you'll meet in making these pictures are enormously removed from those encountered in making ordinary training films, where like a studio cinematographer you can have things pretty well under control, and different even from what you'll face in filming manoeuvres or other training operations. So here are a few hints I hope may be helpful to service cinematographers in the field. They're based on my own experience both as one of the Navy's first cinematographers, more than thirty years ago, and in making studio location trips all over the world, from Alaska to Panama, and from Africa to the South Seas.

First of all, make your equipment as light and simple as you possibly can. Making training films at home, under studiolike conditions, there may be plenty of advantages in using a completely professional studio outfit. But in the field it's different. You'll be pretty much on your own, with no assistants—and perhaps the problem will be complicated by the necessity of dodging Jap or Nazi bullets, as well. So though you may have used a Mitchell at home, don't look down on lighter, simpler outfits for field service. Never use a studio camera when a newsreel-type Akeley, Wall or DeBrie is available, and never use one of these bulkier outfits in the field when you can use an Eyemo or DeVry hand-camera.

Keep your accessories stripped for action, too. Sure it's swell to have a thoroughly professional collection of filters—but when you have to travel light and work fast, you'll find that you'll only need two or three of them. With a red filter, an orange filter, and a yellow one, you'll find you can meet almost any condition that's likely to come up. For that matter, you can really get along with two; my personal pick is a Wratten 21 for heavier correction, and an Aero 2 for lighter-filtered effects.

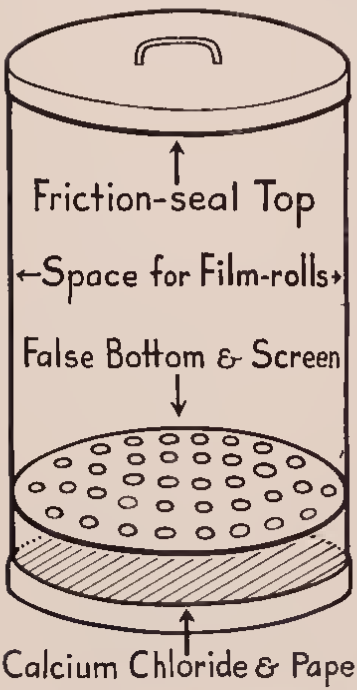

Diagram of an easily made desiccator for dehydrating film in the tropics

Above: U. S. Marine Corps Cinematographers at work in the field. Official photos—U.S.M.C.

Don't forget that three-quarters of the secret of success in using filters is correct exposure. Most photographers have a tendency to overexpose exterior long-shots anyway. We put on a filter, and in correcting exposure for the filter, either get the correct exposure, or maybe even underexpose the shot a bit. The better exposure will automatically give a better rendition of the distant part of the scene. Yet we often give the filter credit for it when in reality the filter in itself has little or no actual effect.

Most of us—studio professionals included—have a tendency to try to use filters when we really shouldn't. I've been told recently of a foreign Army film unit, for example, which had to shoot a silver-painted air-raid siren against a red-brick wall. Unthinkingly, the cameraman put on a red filter, which of course turned the red bricks of the wall almost as white as the silvery siren! He'd have done a good deal better using no filter at all, and maybe underexposing a bit to artificially darken the bricks.

If you're afraid the khaki of our field service uniforms is likely to go too dark on you, your best bet is a yellow filter like the Aero 2, which will tend to lighten the olive drab coloring of the cloth. Watch out, though, for if—as is often the case in field service—some of the uniforms have been washed and faded more than others, the filter will lighten the faded uniforms (which are yellower) disproportionately.

If you're shooting where you've got unusual contrasts in reflective values and lighting in your subject, as on a brightly-lit, sandy beach or desert, or

with a broad expanse of air-field runways, you *can* use a filter like the 3N5 or 5N5, but nine times out of ten you'll do better simply to use a Neutral Density filter—without the color correction—to soften your contrasts.

Exposure is an important factor in successfully handling a field job. Our modern photoelectric exposure-meters are great things, but for field service, don't get into the habit of relying on them too completely. Suppose your meter got damaged, then where would you be? Carrying two meters, each packed and carried in a different part of your outfit, is a mighty good safeguard. But don't get to leaning too completely on meter-readings, at the expense of your ability to judge exposure with passable accuracy.

Remember, there are some parts of the world in which meters just won't work dependably. I had that trouble in Alaska, when I was making "Eskimo;" John Hermann, A S C, had the same experience in the Antarctic with Byrd. I don't know whether the trouble was a matter of temperature, magnetic conditions, or the peculiar lighting combination of low polar sun, snow and hazy atmosphere. But I know that while both of us use our meters very extensively in normal work, we learned we couldn't depend on them under those peculiar circumstances.

Your best bet is to learn how to couple visual judgment of exposure with the use of hand-tests. For these, all you'll need is a changing-bag and a couple of Thermos-bottles in which you can keep developer and hypo. For field use, the well-known "Tabloid" developers are extremely handy. But prepare yourself by knowing just what relation this test-solution will have (*at all temperatures, both above and below normal*) to the normal processing of the lab which will handle your negative.

When in doubt, it's usually safest to overexpose a bit. If you're within about a stop of correct exposure, a good lab will be able to get satisfactorily printable results from your negative. But if you're underexposed, you may be very much out of luck: you can't print what's not on the negative!

In aerial work, by the way, remember to open up a bit when you're shooting down from a plane toward the ground. The ground seldom has nearly as much reflective value to the film as it does to the eye, and underexposure of such scenes is an all too common fault. On the other hand, if you're shooting horizontally in the air, at another plane, you may overexpose if you don't watch yourself.

If, as is often the case in any kind of field work, you find that you have quite a wait between the time you first set up your outfit, and the time you shoot, be sensible about exposure. Except in the early and late parts of the day, when of course the light is changing very fast, you're not likely to find too much variation in lighting (unless the sky is filled with rapidly-changing clouds) over a period of half an hour or so. To put it

Dust is an ever present menace in field work (Photo by John L. Herrmann, A S C.)

differently, between, say, 7 and 7:15 in the morning, you'll probably find quite a measurable difference in light-values. But between, say, 11 and 11:30 the same day, there won't be enough change to give anyone any trouble. If you've made a meter-reading when you set up, it's likely to be still good when you shoot. And taking an extra reading in the field may not only mean missing a shot, but in personally stopping one from the other side!

When you're using telephoto lenses, watch your meter technique! Your meter, remember, is taking in a much wider angle than your long-focus lens; a Weston "Master" or a G-E meter normally scans a 30-degree angle, which is about that of a 40mm lens on 35mm film; but if you're using a 6-inch (150mm.) lens, you're photographing an angle of only 8.4 degrees, while if you use an 8-inch lens (200mm.) your horizontal angle is cut down to 6.3 degrees! That means you're actually making the picture with very much less light than falls on the meter.

There are two remedies. First, you can use a proportionately smaller stop than the meter's indicated reading. Second, you can, with a little experimenting, work out a series of mattes to fit over the meter's cell to cut down the meter's angle to one comparable to that of your telephoto, and then work exactly to the meter-reading. When in doubt, it doesn't hurt to overexpose a bit here, too, for you'll usually find that there's more of your telephoto field in shadow than you can easily measure from camera-position by either method.

In general, though, I think the use of telephoto lens in field work can be greatly exaggerated. There are of course times when you've just got to use them; but in most cases, I think that a shot with a shorter-focus lens—even though the image is smaller—will be better, because it will be crisper, steadier, and of better contrast. If you *have* to use a telephoto, be sure and use the deepest, tightest lens-hood you can possibly get. That will improve the contrast enormously.

In field work, "baby" your equipment just as much as you can. Keep the lenses capped as much as possible, to protect them from dust, spray and other damage. But don't forget to make mighty sure the lens-cap is off before you shoot!

On land, your biggest problem is dust—especially in these days of mechanized warfare. Dust in the aperture, or in any of the bearings, gears or moving parts of the camera can prove ruinous. Keep your camera covered as much as possible, so the dust won't get in, and clean it just as often as conditions permit.

At sea, the salt spray is an enemy of all photographic equipment. It corrodes the aluminum of which most cameras are made, and doesn't do the lenses a bit of good, either. Keep your lenses capped and if possible in closed cases as much as possible (keeping them in tightly-closed cellophane bags is good, too) and when your camera is not in use, keep its metal parts covered with a liberal application of grease, through which the salt air has trouble penetrating.

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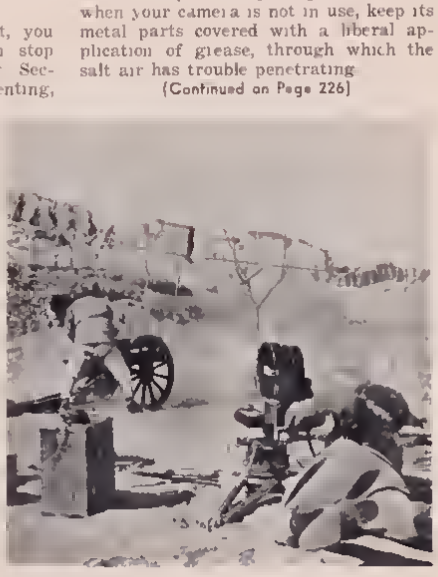


Berndt-Maurer Recorder, with multiple disc recorders and playbacks make a flexible set up for 16mm professional use

Sound And Editing Equipment For Professional 16mm Production

By JAMES A. LARSEN, JR.

ALTHOUGH 16mm sound-recording equipment is manufactured by several companies, including the Berndt-Maurer Corp., Canady Sound Equipment Co., Herman DeVry, R C A, C. R Skinner and Western Electric Co, most of the established professional 16mm. producers used the Berndt-Maurer "Model D" Recorder and amplifiers. This equipment consists of a sound recorder with a variable-area galvanometer, a recording amplifier, a power supply and a noise-reduction amplifier plus the usual microphone and cable connections.

One necessary feature of any 16mm. professional sound-recorder is the ability of the recorder to run equally well in either direction, which makes it possible to record sound negatives suitable for printing with either original camera negatives or with duplicate negatives made from reversal or color originals. The Berndt-Maurer "Model D" is constructed to do this.

Another of its professional features is the gear-driven film-magazine which takes up automatically in either direction. The takeup tension is applied by a friction clutch whose tension is adjustable. The film magazines designed for the recorder are interchangeable with those on the Berndt-Maurer Camera. Both 400-foot and 1000-foot film magazines are available so that in re-recording, a complete two-reel film can be recorded on a single continuous piece of film.

One of the best features of the Berndt-Maurer recording equipment is its ready portability. Recorder, amplifiers, cables etc. can be packed in five small cases. The recorder has a heavy flywheel on the sound recording drive sprocket to insure even flow of film past the recording light. This flywheel must be removed when the equipment is shipped to a location for recording.

With a battery-operated rotary converter, this equipment can be used to make recordings anywhere away from A C current supply, and can be operated with any motor-driven camera either from the converter or from A C current for double system recording.

When the Berndt-Maurer equipment is used with the new high-resolving sound-recording films and filters and printed on fine-grain positive stocks, the frequency-response and freedom from distortion which is obtained with 35mm. recording can be equalled on 16mm. Because 35mm originals are not always equalized for reduction printing on 16mm., it is quite possible to obtain results in direct-16mm. recording that can exceed in quality those obtained by reduction-printing from 35mm. originals.

The Eric Berndt Corporation of Hollywood makes a light-weight inexpensive 16mm recorder which is marketed under the name of "Auricon." This recorder uses 200-foot daylight-loading spools of 16mm sound-recording film and can be used to shoot double-system synchronous dialogue productions with any motor-driven camera, or can be used to record offstage narration, music and sound-effects for silent films.

The carrying case for the recorder serves as a blimp for the recorder so that it can be operated in the same room as the camera and microphone. The recording amplifier and all controls are contained in another case, so that with two small cases, it is possible to record sound on film anywhere that A.C. current is available to drive the recorder motor. A special portable power-pack is offered to drive the recorder motor and also a camera-motor when A.C. current cannot be obtained. Recording of both voice and music have excellent frequency-response and adequate volume.

In making the class B type of film mentioned above—in which an offstage voice is added to a silent film, there is no need for re-recording equipment. However, if the need arises to combine an offstage voice with musical background or sound-effects, or with synchronous dialogue previously recorded, one or more 16mm re-recording units become a necessity. Even with an all-sync dialogue film, it is usually necessary and always desirable to re-record in order to make sound levels match.

With these requirements in mind, the makers of the Berndt-Maurer recorder introduced a high quality film phonograph for re-recording purposes shortly after they made the "Model D" recorder available. With the optical system in this film phonograph, no loss of high frequencies is encountered, and no distortions are introduced in the process of re-recording. Furthermore, the frequency-characteristics of the re-recorded track may be modified by means of suitable filter networks as is the common practice in 35mm re-recording.

With several of these film phonographs or "dummies" it is possible to get almost any effect that is standard practice in 35mm re-recording. A special reproducing amplifier and speaker are available for use with the film-phonograph which are capable of reproducing all the frequencies that the 16mm. recorder and film are capable of recording. A loud-speaker for monitoring original recordings or re-recordings is supplied which,

(Continued on Page 238)

Shooting With The Commandos

By CAPT. H. W. RIGNOLD

As Told to a Representative of the British Association of Cine Technicians

HARRY RIGNOLD, pocket-size cameraman, has been a War Office cinematographer since the beginning of the war (11 Sept., 1939). He went right through the West Front campaign, shooting stuff for record purposes and the newsreels, and only just managed to get out of Boulogne in time. Since the formation of the Army Film Unit he has been cameraman for them. The Vaagso material is generally reckoned to be the finest action stuff shot by British cameramen in this war.

"We'd been up north with the Commando boys for more than a week, practising landings and so on. The party consisted of Capt. Roy Boulting, also of the Army Film Unit, Jack Ramsden, of Movietone, and Harry Watt, Lt. Mallindine, official photographer, Ralph Walling, of Reuter's Agency, and myself. Word came through that we could expect to move shortly, so the day before sailing we shot all the introductory and insert stuff (weighing anchor, priming the grenades, limbering up and standing to waiting for the order to land). I borrowed some ship's loading-lights to photograph these with.

"The next day we sailed. There were two ships taking the Commandos, with the landing barges secured on deck, and a naval escort. Jack Ramsden and Mallindine went on one ship, the rest of our party on the other. The Commando fellows are a grand bunch. As a matter of fact several of them I knew quite well already as I'd been with them in France, Lofoten. The only thing that worried me was that all their equipment, table drawers and so on were stuffed with ready primed hand grenades, revolvers and ammunition—and the nonchalant way in which they tossed the stuff about was enough to scare you stiff. One of their tricks was to demonstrate the fuse on their bakelite blast grenades. This is a length of tape with a weight on the end, and they would unwind this till you cried for mercy. I'd got a revolver too, for my own protection, a whacking great .45, which I've never had occasion to use yet and which will almost certainly knock me over when I do.

"The equipment I took included two Eyemos, plenty of stock, Plus-X and Double-X, a light freehead tripod for use on board ship—all the stuff on land was shot in the hand and I was very pleased afterwards with its steadiness and the success of some of the panning shots. I was determined that whatever rough handling the cameras got they shouldn't go out of focus, so during the preparatory period I continually made tests and in fact did the last ones just before we landed.

Jack Ramsden had a Newman and a DeVry. The advantage of a Newman, of course, is that it takes a 200-ft. magazine, and has an easier finder for long-focus lenses. But it is bulky and very tiring to lug about for long periods if you're heavily laden and running. I didn't need to use any other lenses than the 1½ and 2 inch on Vaagso.

With the two Eyemos I simply shot the 100 ft. in one, then the 100 ft. in the other, whipped out the exposed spools and reloaded both, which is a very quick operation, and if I had had anybody to reload for me, would not have held us up at all, as we could have reloaded one camera whilst I was shooting with the other.

"Anyway, off we started, and I must confess the voyage wasn't too pleasant for me. On the way over, I was sick as a dog. The ship had all the landing barges lashed on deck and what with that and the extremely rough sea she rolled so badly that I was fit to die. However, luckily the last bit of the voyage was in a calm channel, which gave me the chance to recover and go below to get a bit of breakfast—the last food before we got on board again. There were bully beef sandwiches for anyone to take who wanted them, but I don't think those who did had any time or desire for eating when it came to the point—the tension was too great.

The weather of couse was bitterly cold. We wore battledress (no great-coats) with webbing equipment, and I carried the stock in packs, one on the left for exposed, one on the right for unexposed. Under the battledress tunic we wore a leather jerkin which fortunately went well below the level of the tunic and acted as a windbreaker. Under that a good few woolen pullovers, with a rollneck one on top, with the tunic buttoned up over the rollneck as it was white and would give us away. Under the whole issue I wore pyjama trousers. Then we had close-fitting woolen gauntlets, with a thumb and one finger and a second gabardine pair to pull over them to hold them tight at the wrist: of course I had to take these off everytime I reloaded and my hands kept pretty numb. So there we were all ready.

"After we'd gone up the Sound a bit, the other ship with Jack Ramsden aboard separated to do their job on the island of Maaloy, and shortly after that the order came through to stand to, and we got into the barges. It was about half-past eight in the morning and just beginning to get light.

As the barges came close inshore Hampdens flew over dropping smoke-bombs all along the beach and the air was very soon thick from them. It was in the middle of this and in the half-light of morning, with a bit of help from planes, that we shot the stuff of the barges coming in and troops landing in the smoke.

I used Super-XX on this, but for the rest of the time Plus-X only. Jack Rams-

(Continued on Page 237)

Animated Cartoon Production Today

Part II: Production Preparation

By CARL FALLBERG

THE director of an animated cartoon, in general, has the same responsibility as the director of a live-action picture. He determines the tempo and pacing of the picture, the staging, screen performances of characters, and coordinates all of the production activities—animation, music, layouts, dialog and sound-effects recording, cutting and color, keeping all of these varied factors under the control of his experience and judgment and directing their functions toward one homogeneous result the finished picture.

He can make or break a picture. A story man can go only so far in presenting an idea; the director must take this idea and bring it to life as an active, moving piece of entertainment. If it moves badly—if the gags fail to get over, if the animation is uninspired, if the staging and cutting are confusing, if the story pacing is uneven if the music and color are dull, no one is blamed but the director.

He must be a jack-of-all-trades in the cartoon business and a pretty fair master of all of them. He deals with the different personalities of many men constantly, so he has to have a streak of the diplomat in him. Budgets and picture costs impose problems for his business sense to tackle. He must appreciate the finer points of art and music, he must be able to wet-nurse a weak story into strong life, he has to understand and appreciate the problems of the animator, layout man, background artist, film cutter, musician, cameraman, inker and painter. This probably sounds like an awful lot for one man to know—and it is. But that's why good directors are few and far between.

This combination of talents is developed only through experience. Most of the cartoon directors have come up to their present spots through animation. Complete understanding of this part of the business is important, because the director deals with the animator and his problems more closely than with any other part of the production procedure.

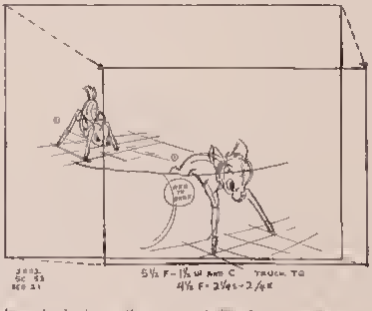
As a rule, the director will not participate in the process of story development before the picture reaches him for production. His contact with the story is only through an occasional story meeting prior to the time he takes over. However, story changes and improvements are liable to occur anywhere along the line during production, for there's no telling when a new idea is going to pop up that's better than one already in the story. But allowances can't be made in time and money budgets for changes of this sort; the story continuity is assumed to be correct when it enters the director's unit. So the director, all through production, is out on a limb—beset by the urge to make changes and improvements but held in check by the uncompromising limitations of the picture's budget.

The director has become fairly familiar with the story before it lands in his lap, so has had his chance to get his two-cents worth in regarding it's development, and really can't blame the story man completely if he isn't getting some funny stuff to produce. While it isn't necessary that he be creative, he should be a good critic of gags and story values and be able to rebuild weak spots if he discovers any during the course of timing the picture.

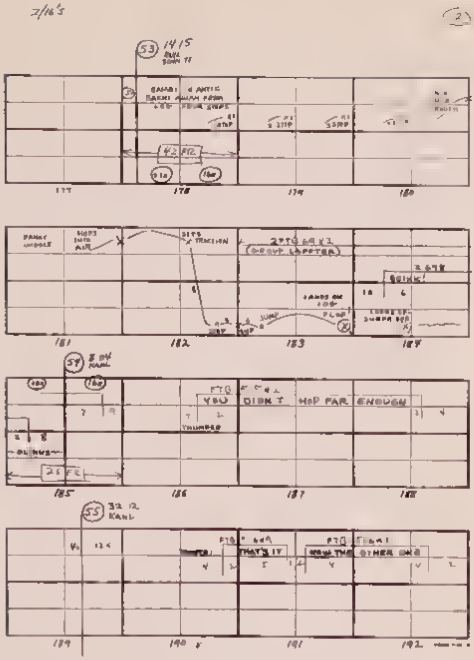
The ideal condition would be for the story to come to the director so tight, so foolproof and so carefully worked out by the story man that from here on in it's just a matter of animating life into it. The story man generally times his material out with a stop-watch, to make sure it will fit into the prescribed footage for a short-subject, between 600 and 700 feet. However, the story man, no matter how carefully he weighs his material, cannot analyze it as thoroughly as the director, who plans every action to the last frame of film.

The story gets its final, complete working-over when the director starts timing it out for animation. He sits down with his stop watch and metronome, translating every action on the story board into terms of screen footage. He analyzes these actions carefully, probing deep for any bugs or weak spots—which show up in a hurry under this exacting scrutiny. Better ways of staging are uncovered; gags are added to strengthen a story point, or material eliminated that's too long or off the track or disturbing to the overall story pacing. He finds more simple and direct ways to

Layout man's sketch of the finished set up with the path of the character's action illustrated. This is the working layout on which the animator plans his action.



Layout chart on the scene indicating camera-positions, path of action and perspective for animator to follow.



On opposite page the story sketches of a scene from Walt Disney's "Bambi." Above this page bar work sheet of the same scene. In this is a complete record of everything in the scene—scene numbers and footage tempo and lengths of musical measures dialog and sound effects tracks—in their correct relationship. At right animator's pencilled drawing of actual animation of this scene. All illustrations © Walt Disney Productions

put over business; assuming that the direct approach is the only one. In animation, no false movements should confuse the main line of action, likewise, there should be no false gags or ideas to distract from the main story line.

The axe is ruthlessly swung, if necessary, to chop the overall footage down to the prescribed 700 foot limit, or to trim the story into a simpler form. If it isn't advisable to trim out any business, the director can go through the whole picture and find spots to speed up action just a little faster here and there. Usually, the story man is urged to deliver a story that is a bit under footage according to his rough, first-hand timing, for invariably the director will require more footage when he goes in for his more detailed timing.

Many considerations enter into this timing process. It isn't a matter of simply checking the length of the actions mechanically with a stop-watch. Every action has to mean something in forwarding the story. The animator must have very definite action outlined to him before he can translate story ideas into tangible drawings. Nothing will appear on the screen that hasn't been drawn. The smallest blink of a character's eye has to be accounted for with carefully executed drawings, costing money. There are no ad-libbing performances in cartoons. A live-action director can outline the general idea of an action to a performer like W. C. Fields and leave the actual performance up to Fields' own judgment and ad-libbing genius. But animators, assistant animators, in-betweeners, inkers and painters can't ad-lib their way through a cartoon. It would be an unholy mess—and a costly mess too.

A cartoon director, therefore, is obliged to account rigidly for every bit of story action, breaking it down into definite pieces of pantomime of very definite lengths.

The director starts timing the picture on the assumption that every foot of action will be paced to some particular musical tempo. Music is the backbone of a cartoon. The whole effect and charm of animated cartoons lies in the coordination of music and action. Not

(Continued on Page 232)

Aces of the Camera
XVII:
George J. Folsey, A.S.C.

By WALTER BLANCHARD

GEORGE J. FOLSEY, A.S.C., is the perfect embodiment of the old axiom that "cinematographers are born, not made." So far as he can recollect, not one of his family had ever had any inclination toward photography, or even so much as owned a dollar "Brownie." He, himself, had never had any photographic leanings. But when, at the age of fourteen, he had his first glimpse of the details of a studio cinematographer's daily work, something clicked inside him and said "That's it!" Today, he is acknowledged as one of the industry's foremost specialists in glamor cinematography, at a time when the pressure of production speed-ups tends greatly toward standardized camerawork and lighting, he is one of the few who manages to retain a strongly distinctive style. You can walk in on the middle of any one of his pictures and before three scenes have flashed across the scene, say to yourself with confidence, "George Folsey must have photographed this."

Looking back at things, George Folsey finds a good deal of humor in the way he started into the business. "Believe it or not," he says, "I'd been working in the studio for fully half a day before I knew what kind of a business I was in! That sounds as though I was the original Joe Dope, but it really wasn't quite as bad as all that.

"Here's how it happened. I'd been working as an office-boy for a New York magazine publishing firm, but somehow the work didn't suit me. I wasn't afraid of hard work—but nothing about the publishing business managed to capture my imagination. Finally one morning I just decided there wasn't any future for me in that work. So I quit. Just like that.

"I went back to the Y. M. C. A. Bureau through which I had gotten the job, and told them I didn't like it, that they should send me out on something else. They dug into their files and told me they'd just had a call for an office-boy from the Lasky Feature Play Company. That didn't mean anything to me, but it sounded like a job, so off I went to the address they gave me.

"When I reached the place, the chap in charge of the office insisted that even though it was afternoon, I get to work right then, rather than start in the morning. I didn't particularly want to, but finally I was persuaded. I remember it was one of those hot, sleepy New York summer afternoons, and I didn't have very much to do. I hadn't the slightest idea about what my new employers did, and nothing happened to enlighten me.

"The next morning I reported for work as scheduled. A few minutes later, I almost fell out of my chair: through the door and past me into the dark recesses of the building walked Marguerite Clarke! A minute or so later, in came Carlyle Blackwell—Mary Pickford—Louise Huff—John Barrymore—Harold Lockwood—all the movie stars I'd admired at the neighborhood nickelodeon! And I discovered they actually worked there—! I decided I was going to like that job—and hold it no matter what!

"In this, I met some opposition from the family. Not that they disapproved particularly of the movies, but the job paid two dollars a week less than my previous one, and they couldn't see any future in it.

"But I stuck. The more I saw of the picture business, the more I wanted to be a part of it. There was such infinite variety to everything about it—even for me, a lowly, fourteen-year-old office-boy. One of my most frequent tasks was to go out at noon-time and bring in sandwiches for Jesse Lasky's lunch—not to mention many a cocktail for John Barrymore. At other times, I'd have to take messages in to people on the stage. What a thrill that was—to prowl around that huge, echoing loft where in one corner I might find a company shooting a Western, in another, a troupe doing a 'society drama,' and in another, still another group filming a romantic costume drama—all on one stage.

"Many's the time when a harassed assistant director would rush out into the office and press me into service when some troupe inside suddenly needed a kid to play an office-boy, a bell-hop, an elevator-

(Continued on Page 230)

JACKMAN AGAIN HEADS A. S. C.

President Fred Jackman

FRED W JACKMAN was re-elected President of the American Society of Cinematographers at the Society's annual election early in April Behind him to guide the organization's destinies during its twenty-fourth year stands one of the strongest and most completely representative slates of governing officers the A S C has ever had First Vice-President for the coming year is Academy Award-winner Arthur C Miller, Second Vice-President is Leonard Smith, re-elected after a year of distinguished service in that post- Third Vice President is Karl Struss, a newcomer to the Society's governing board. Secretary-Treasurer is Byron Haskin, and George J Folsey fills the newly-created post of Sergeant-at-Arms

In conformity with the Society's policy by which five new members are elected each year to serve three-year terms on the Board of Governors, Past President John W. Boyle, Charles G Clarke (re-elected) Arthur Miller, Ray Rennahan, Sol Polito and Karl Struss were elected to the Society's Board of Governors, with Boyle replacing George Barnes, who has been unable to serve actively. The complete governing board consists of Past-President John Arnold, Past-President Boyle, Charles Clarke, Arthur Edeson, George Folsey, Byron Haskin, President Jackman, Rudy Maté, Arthur Miller, Sol Polito, Ray Rennahan, Charles Schoenbaum, Leonard Smith, Karl Struss and Joseph Walker

Following his re-election Jackman said, "I consider it a privilege and an honor to be selected to serve again, and with such a truly representative group of co-workers Though we officially head the Society, we do so only as representatives of the membership, and I cannot recall a time when the members have elected a steadier or more thoroughly representative group to the board.

"We are all of us going to miss the several members whose terms expired with this election, even though we know we are assured of their continued loyalty and cooperation as individual members of the Society On the other hand, I feel sure the Society is the gainer by the appearance of so many new members among the Board and officers. We do not want the A S C ever to degenerate into an organization that is constantly run by a comparatively small group of the same individuals, and this rotation of offices and responsibility is a very healthy sign that this is not going to happen

"It is for this reason that we are initiating a policy of inviting individual members to the Board's meetings, where their advice and suggestions as we try to plan the Society's policies will be most cordially welcomed We have no secrets we are only fifteen men trying as best we can to put into action the desires of the membership behind us, and ideas from other members, who may not perhaps be so close to the organization's problems as we, can be very helpful to us

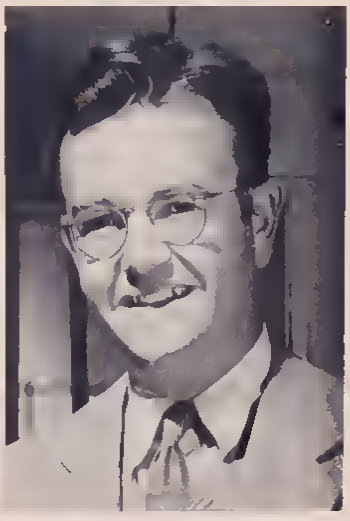
"I am happy to be able to report that the Society's position as we start our new administrative year is better in almost every way than it has been for many years Financially, the Society is operating on a satisfactorily sound basis Our position in the industry is much more satisfactory, as well Problems which have troubled the profession for years are well on way to successful solution

"During the coming year, we as cinematographers will find added problems and responsibilities to face, and new and important opportunities for service, as well The Nation's War Effort is placing a twofold responsibility upon us, not only as an organization, but as individual cinematographers On the one hand, the photographic services of our armed forces are calling more and more of our members to active duty As time goes on, still more cinematographers are bound to be summoned to key posts in these services

"Yet at the same time, production here in the studios must go on Motion pictures for entertainment, for the upbuilding of public morale, and for public information are essential services which must be maintained As more and more of the industry's key photographic personnel go into the uniformed service, this will not be easy—but we can and will do it END

First Vice President Arthur Miller

Second Vice President Leonard Smith



Third Vice President Karl Struss

A.S.C. on Parade

Art Lloyd, A.S.C., is now officially **Captain Art Lloyd,** U S Army Signal Corps En route back to the Army's Training Film Production Center at Ft Monmouth, **Art** is looking forward to a reunion-in-uniform with his son, a Lieutenant in the Army Air Force And with those Captain's bars on his shoulder, Pappy Art still rates a respectful salute from the offspring!

•

Pitching in for semi-military service on the Home Front, A.S.C. pilots **John Fulton, A.S.C.,** and **Dewey Wrigley, A.S.C.,** are active members of the Civil Air Patrol here in California Likewise **John L. Herrmann, A.S.C.,** who does his flying and filming down around New Orleans way

•

From Rio de Janeiro, **Harry Wild, A.S.C.,** airmails a cheerful "t'aint so" to the squib about his car in last month's issue Says **Harry,** "Thanks for the publicity, but I still say it wasn't my car!" (Maybe it wasn't, but we're still pretty sure we saw **Harry's** name on the registration-slip—but we won't argue!) **Harry** seems to like Brazil. He continues, "Well, Bill, as for Rio, it is a great place with plenty of color **"Duke" Greene** and I are working hard—both in the studio and on exteriors We expect to be here for two months more Give our regards to all the boys."

•

Virgil Miller, A.S.C., phones in to take our printers to task for a typographical error in his article on filter factors in the March issue Right at the start, **Virge** correctly stated that "Orthochromatic negative, being *in*sensitive to the red end of the spectrum, gave us untrue color-values" But our printer, apparently wanting to give the film all the breaks, dropped off that little "in"—which made all the difference in the world! Incidentally, **Virge** is just back from Ft Sill, Okla., where he finished an Army Training film **five weeks under schedule!** Nice going, we'd say

•

Ernie Haller, A.S.C., Jimmie Howe, A.S.C., and **Sol Polito, A.S.C.,** sitting at the Warner studio cafe's camera table, listening solemnly while Acadaward Actor Donald Crisp ribs them with an account of a Rube Goldbergish plan to save film by using sensitized string and a doughnut shaped super wide-angle lens.

•

Greetings to two new members of the A.S.C.—**Al Irving, A.S.C.,** and **Rolla Flora, A.S.C.**—both of 20th-Fox' trick department

•

Lucien Andriot, A.S.C., just had his option picked up at 20th-Fox. Ditto **Charles Lang, A.S.C.,** at Paramount, and **Phil Tannura, A.S.C.,** at Columbia **"Little Phil"** tells us he's starting his sixth picture since Jan 1st, with an occasional day off for good behavior.

•

There'es a question in our mind who is doing the most lyrical job on Loew-Lewin's "Moon and Sixpence"—**Johnny Seitz, A.S.C.,** who is photographing it, or Johnny Miles, who is publicizing it. We'd say it would be a photofinish if Publicist Johnny would write some of his lyric prose about the swell work Cinematographer **Johnny** is doing How about it, Johnny—? (You guess which!)

Looks as though **John L. Herrman, A.S.C., F.R.P.S., F.R.S.A.,** etc., can add a new title to his alphabetical trailer. On a recent vacation in Florida he dropped in to visit his pal Clyde Beatty, and —as the picture shows—tried his hand at lion-taming

•

George Folsey, A.S.C., happy as a kid with a new toy, pedalling around Brentwood on his new bike, a snazzy English racing model.

Appreciation to columnist Sidney Skolsky for the nice break he gave **George Robinson, A.S.C.,** in a recent column

Lloyd Knechtel, A.S.C., is another member who has switched from civvies to uniform As **First Lieutenant Knechtel, Signal Corps, U.S.A.,** he's off to take charge of process work at the Army's new Film Production Center, the erstwhile Paramount Astoria (L I) studio.

•

We got it straight from headquartera that this true Seems ten years ago **Jimmie Howe, A.S.C.,** had a pal who was a struggling young scribbler One evening, **Jimmie** suggested a story-idea to the scribbler. A few weeks later, the writer handed **Jimmie** a script based on it, with the request that **Jimmie** show it it to his then boss, David O Selznick But **Jimmie** got cold feet, maybe he felt more at home behind the camera than as an amateur literary agent Anyway, he reported D.O S didn't like it, and his pal made him a present of the script, which he tossed casually into his car But today, **Jimmie's** beginning to thank his lucky stars he kept transferring the script from each car to its successor His author-pal, you see, is William Saroyan, whose latest script went to MGM for $60,000—!

•

Charles Schoenbaum, A.S.C., in town from filming an Army Training pic at Ft Sill, Okla., had only time enough to put a new toothbrush and a clean collar into his bag before hopping off for Salt Lake City, locationing for Paramount

•

Because his car was in the shop, **Leonard Smith, A.S.C.,** rode into town on the street-car the other day. He says it was his first trolley-ride in more than twenty years—and now he hopes more than ever they find something to make tires out of!

•

Always a pleasure to visit the camera-rental shop of **Sam Landers, A.S.C.,** 'cause both of us collect phonograph records—and like to talk about it when cinematic shop-talk is exhausted

THROUGH the EDITOR'S FINDER

AS America's participation in the war increases, it is interesting to note the parallel increase in the use of 16mm motion pictures by governmental agencies, civil and military alike. Instructional films, not only for training embryo soldiers and sailors in specialized military subjects, but for training civilians in civil defense subjects, as well, are being released in 16mm, regardless of how they may have been made originaly. Several governmental departments, both civil and military, are turning to amateur-made 16mm films as a vital source of information about foreign regions which are or might possibly become theatres of military operations. And at least one branch of our military forces has standardized its film-making program on 16mm. from camera to projector.

In this connection, we'd like to urge upon those in charge of our military film-making a fuller consideration of the many advantages of using direct 16mm. throughout. With of course the exception of films intended for immediate theatrical release, like the O E M documentaries, and the training films assigned for production by Hollywood's studios, which are already geared to 35mm. rather than 16mm. production, it would seem that direct 16mm offers the ideal medium for military filming. Camera equipment is lighter, more portable, and much more readily available in quantity than even the simplest of 35mm. Direct-16mm. sound recording, where the ultimate release is to be largely in 16mm, gives better results than any optical or electrical reduction from a 35mm. track. Film-supplies are not only more compact and economical, but in a pinch 16mm. film—and often processing, as well, due to the far flung facilities of Eastman and other firms—will be available in almost any civilized part of the globe. And finally, modern technology has made it possible to obtain excellent enlargements from well-photographed 16mm. to 35mm. wherever and whenever the securing of some unexpectedly important subject makes a 35mm theatrical release desirable.

There is an additional, but seldom considered, advantage to this "all-out" use of 16mm. as regards the personnel who will handle the actual camera manipulation. It has been estimated that there are close to a million 16mm. and 8mm. cameras in use in America today for amateur, semi-professional and professional film-making. Of the people who use these cameras, several hundred thousand are inevitably of military age. Many of them are already in our armed services, through draft or enlistment, and are just as inevitably gravitating toward the respective photographic sections. Though they know cinematography, these men would require time-consuming and expensive training before they can efficiently handle professional 35mm equipment. *But they are already familiar with the capabilities and use of 16mm equipment*—more so, in many cases, than the average 35mm.-trained professional. Under the direction of studio or news-reel-trained professionals who, as commissioned officers, may logically be expected to head any field film unit, these erstwhile amateurs, with little or no additional training, are capable of going into the field and bringing back a first-class 16mm. picture. It has been said that our Army, Navy, Air Force and Marine Corps need trained motion picture crews urgently. Here's one way to get them, quickly and efficiently!

•

THE subject came up in one of those lunch-time chats at a studio commissary. A rather distinguished cinematographer had been abruptly removed from a picture, and replaced by another man. The cinematographers present knew that no particular blame attached to the man removed; it simply wasn't his type of picture. Why was it, then, we wondered, that so many non-photographic folk in the studios went around commenting on it in hushed voices and the peculiar psuedo-horror that is the stock-in trade of scandal-mongers, to the effect that "I hear poor old X—— was pulled off a picture. He must be slipping!"

Come to think of it, the cinematographer's position in a case like that is unique. A writer can miss fire and be replaced on an assignment and everybody takes it as a matter of course. A director can bow out of an assignment that doesn't suit him, or stick with it and turn in an indifferent job, and everybody acknowledges it just wasn't his type of story. A star or featured player can give a poor performance in an unsuitable part, and receive praise for doing so well with indifferent material or in a part for which he was obviously miscast.

But let the same thing happen to a cinematographer, and studio tongues start wagging with "poor X—— must be slipping!"

And yet if you analyze them, the photographic differences between a musical, say, and a Bette Davis drama, or between a program picture and an "A", are at the least no less than those involved in writing, directing or acting. Why, then, should it be considered normal for a writer, director or player to admit he's mis-cast on a given assignment—and not a cinematographer?

In one sense, it might be termed a compliment to the cinematographer that he is given credit for a degree of versatility that no other group in the industry even approaches. But it seems to us more likely that the time has come when the industry should recognize that cinematographers, as well as directors, writers and players, can be mis-cast!

EVERY so often, somebody (usually outside the industry) questions our contention that studio cinematography is a job of literally man-killing responsibility, and badly underpaid, to boot. When we point to the number of graves prematurely filled by A.S.C. members, they insist that some of these men must have been in poor health (they don't say why!) and that the law of averages, so dear to insurance underwriters, would have removed them from our midst, anyway. To support their side of the argument, they point out that the cinematographer has a fascinating, varied and enormously glamorous work, and earns on the average a good deal more than the average doctor, lawyer or corporation executive outside the industry.

For their benefit, here's a bit of rough mathematics which may prove revealing. Assume the average major-studio program picture to represent an investment of $400,000, with a shooting-schedule of 18 days. (That's a fair average; some go considerably under that in both time and money, but others go sufficiently over it to make the average balance out correctly.) Assume again that these 18 working days consist of 8 working hours apiece. A bit of elementary figuring with pencil and paper will show that this average picture represents a cost of $22,222 per shooting day, a little more figuring will show that this means an average of $2,777 per working hour, or *$462.95 per minute!* And these figures increase disproportionately as the budget and importance of the production increase above the average. Imagine what they must be for a "Gone With the Wind!"

The director, producer, writers, actors and others all have a clear responsibility as to how purposefully these expensive minutes, hours and days are spent. But upon the cinematographer rests the sole responsibility for translating what is done during these precious minutes into saleable form on the little strip of celluloid which goes to the theatres. This responsibility is his alone—undivided. There is no one with whom he can share it. It is for him alone to decide whether, if he spends a minute readjusting a lamp to make the star look a trifle more glamorous, it is worth the $500 it costs his employer. It is for him to decide whether, if he spends an additional ten minutes lighting, rehearsing and perfecting a difficult dolly-shot, it is worth the $5,000 in additional costs.

Bear in mind, too, that retakes made (as they often are) after sets have been dismantled and actors released from their contracts are much more costly than the original scenes they replace. Yet retakes to repair faulty acting, direction or writing are taken as commonplace, while in most studios, retakes for the camera are usually regarded as but one degree less criminal than sabotage or embezzlement!

PHOTOGRAPHY OF THE MONTH

JUNGLE BOOK

Alexander Korda Production, United Artists Release (Technicolor)

Directors of Photography: **Lee Garmes, A.S.C., and W. Howard Greene, A.S.C.**

Seldom has a picture been so appropriately publicized as "Jungle Book," to which the catch-line "It's out of this world" has been applied. Very probably our friends in India will report that what the Kordas, Lee Garmes and "Duke" Greene have put on the screen has very little in common with the actual India in which 300,000,000 find much more of tragedy and problems than of romance and adventure, but even they cannot deny that the film presents some of the most magnificently Technicolored fantasy that has ever reached the screen.

It would be hard to find a better man in the industry than Lee Garmes, A.S.C., for bringing to the screen the elusive, other-worldly quality a fantasy like this demands. In "Jungle Book," he is very ably seconded by the Technicolor wisdom of W. Howard Greene, A.S.C., the imaginative production design of Vincent Korda, and the sets created by art directors Jack Okey and J. McMillan Johnson. Their use of color is especially interesting—the color is laid on with a lavish brush, yet so skillfully planned and photographed that while conveying an effect of vivid warmth, it never becomes garish. Indeed, for all the color, the dominant impression you carry from the theatre is one of vibrant, but subdued color. The people who so badly mis-handled the art direction of "Louisiana Purchase" ought by all means to be compelled to see "Jungle Book" and study it to see what really clever artists can do in designing for Technicolor.

Camerawork and lighting as Garmes and Greene have handled them are excellent, though at times there was perhaps a bit too much reliance on the traditionally flat Technicolor lighting. The result is, however, always magnificently pictorial. The effect-lightings were interesting, and the special-effects work of Lawrence deserves commendation. William Hornbeck's skill in editing is also noteworthy, especially the way in which he has intercut scenes employing a real python with others in which a "prop" reptile was used, and in conveying—almost entirely through cutting—the impression that "Mowgli" and the black panther were friends when in actuality there is scarcely a scene in which the two actually appeared together!

SABOTEUR

Frank Lloyd Production for Universal

Director of Photography: **Joseph Valentine, A.S.C.**

From the opening title to the final fade-out this latest of Alfred Hitchcock's suspenseful melodramas pays tribute to the photographic ingenuity of director of photography Joseph Valentine, A.S.C. His imaginative effect-lightings and pictorial sense do a great deal to establish and maintain the mood of the picture. He has turned in some of the finest work—technically and pictorially—that he has done in many months. He does uncommonly well by the players—especially Robert Cummings, who has never appeared to such good advantage. He does well by Priscilla Lane, too, though the make-up department's ideas of how she should wear her hair certainly didn't give Valentine any help in glamorizing her.

But Valentine's real value to the picture is not so easily detected at first sight. Only when you sit through a second screening are you likely to begin to realize how his picture-minded ingenuity has contributed production value to almost every sequence. The opening title—simplicity itself, yet enormously effective in establishing the picture's mood—sprang, we understand, from his fertile imagination. In the opening sequence, his deft use of a back ing to suggest a vast modern airplane-plant is noteworthy. Repeatedly throughout the picture he has used his knowledge of the camera's vast—and usually unutilized—powers of suggestion to obtain important production effects with a minimum of actual construction. The impressive climaxing scenes of the chase inside the Statue of Liberty, for instance, if you analyze them, were done with an incredible minimum of actual construction: the set scarcely extended an inch beyond the widest long-shot coverage of the camera. In other scenes, he has repeatedly gotten from almost nothing effects the average cinematographer and art director would obtain only with extensive construction. And he has done it convincingly.

In addition, "Saboteur" has some of the most remarkable examples of exteriors convincingly filmed on the stage that we have ever seen. The rain sequence outside the blind philosopher's cabin is one of them; another, still more spectacular, is the entire sequence centering around the ranch-house and its swimming pool. The waterfall sequence (with the exception of the long-shot in which the hero leaps into the river from a high bridge) is another done entirely on the stage. Much of the picture utilizes excellent process-work for which, so we understand, Valentine was also responsible. In all, we can recommend "Saboteur," not only as an excellent "cops-and-robbers" thriller in the Hitchcock manner, but as an outstanding example of the valuable contributions a clever cinematographer can make to a production—if he is given a chance to do more than just photograph.

THE INVADERS

Ortus Films Production, Columbia Release.

Director of Photography: **Frederick Young, F.R.P.S.**

From every viewpoint, "The Invaders" is one of the most remarkable films of the season. Much of it was filmed on actual locations in Canada, and the interiors were filmed partly at the Associated Sound News Studios in Montreal, and partly at the D. & P. Studios in England. Director of Photography Fred Young, well known in this country as probably England's foremost cinematographer, has done a magnificent job under conditions which could not have been of the easiest. His handling of the exteriors is really inspiring; they are some of the finest examples of exterior photography we've seen in a very long time—and what a delightful change these unfamiliar Canadian locations are from the too-familiar ones to which most Hollywood troupes are restricted, not to mention the ever-present stage-built exteriors which we must so often substitute for real locations in our effort to "be commercial." Even if it didn't have a strong story and a series of truly remarkable performances, "The Invaders" would be well worth seeing just for the refreshing exteriors.

Young's treatment of the film—exteriors and interiors alike—is almost flawless. In a picture in which melodramatic realism is the dramatic keynote, he keeps throughout to a mood of almost documentary reality in his camerawork and lightings. Even in scenes you know must have been made in the studio, he manages to escape conveying a "studio lighting" impression, and makes one feel he is privileged, instead, to peep in on a slice of real life. Yet with all that, Young deals very skillfully indeed with his players. Even in Hollywood Laurence Olivier, Leslie Howard and Raymond have not appeared to any more advantage. And in scenes which permit it, Young has achieved some excellently pictorial effect-lightings.

Another notable feature of the film is the comparatively small amount of special-process photography which seems to have been used. The introductory action on the Nazi submarine, which—especially its destruction by R.C.A.F. bombers—we would probably have done in miniature, is done in full-scale construction. The picture gains measurably thereby. The torpedoing of the merchant-ship is also apparently full-scale, rather than miniature, and is probably clipped from some official German-made scenes of torpedoing in either this or the last war. There are a few scenes which make use of process backgrounds, but they are held to a minimum, and handled very capably, to boot.

All told, we urge you to see "The Invaders"

IN THIS OUR LIFE

Warner Bros.-First National Picture.
Director of Photography, **Ernest Haller, A.S.C.**
Special Effects by **Byron Haskin, A.S.C.**, and **Robert Burks, A.S.C.**

"In This Our Life" is by no means the most spectacular achievement that Ernest Haller, A.S.C., and Bette Davis have shared, but it is an extremely workmanlike job on both counts, none the less. The picture's locale and mood tend to keep Haller from making the picture as pictorial as many he has filmed, but his work retains the smooth finish that characterizes his style. This reviewer particularly liked his compositions, which were dramatically very graphic. His lightings were excellent, too, and deal excellently with the players.

Working with the highly cooperative John Huston, Haller had an unusually free hand with the pictorial details of the picture, and the way the compositions are used to enhance the dramatic value of the action, and the smooth visual flow that is maintained throughout—with virtually no useless camera-moves—is something that will bear very careful study

THE WIFE TAKES A FLYER

Columbia Production
Director of Photography: **Franz F. Planer, A.S.C.**

In photographing this picture, Director of Photography Franz Planer had the always difficult problem of handling a story which intermingles melodrama (against a tragic background) with the broadest of farce-comedy—the sort that the Germans (who unfortunately won't see it) used to call a "grotesk." He has handled it very expertly, indeed, especially when you realize how hard it is to build a visually melodramatic effect-lighting when you know that in the middle of the scene your heavy is likely to get a swift kick in the pants!

The result is naturally a series of compromises between the low-keyed lighting the melodrama requires, and the much higher key the comedy demands. Planer has handled the problem very smoothly, with the result that the picture is not only diverting entertainment, but a decidedly more than adequate example of good camerawork.

Inevitably, it is in his effect-lightings that Planer really does his best work in the picture. The blackout sequence, for instance, is probably the best photographic representation of a blackout that has yet reached the screen. He deals very well, too, with his players, from Joan Bennett down the line to the thirty inhabitants of the old-maids' home. The result, all told, is one which, while it probably won't win Planer an Oscar, will certainly win him added credit as a very capable workman

WOMAN OF THE YEAR

Metro-Goldwyn-Mayer Production
Director of Photography: **Joseph Ruttenberg, A.S.C.**

After most of the rest of the country had seen "Woman of the Year," MGM finally got around to revealing it to the Hollywood press. And we can duly report what most of the country already knows—that "Woman of the Year" is a very diverting piece of entertainment, and an outstanding example of film-craftsmanship

Joe Ruttenberg does his usual excellent job with camera and lighting. Some of his compositions and effect-lightings are so far above par as to demand careful study. His treatment of the stars is excellent; in fact, he does more to glamorize Katherine Hepburn than we'd have thought possible.

One feature about the picture that we liked was the extreme smoothness of the visual presentation, both in the way the scenes flowed smoothly together, and in the excellent use of purely visual action—often for long sequences — to advance the story and characterizations. Many a director and scenarist (to say nothing of producers) should take lessons from director Stevens and cinematographer Ruttenberg in this respect

JUKE GIRL

Warner Bros.-First National Production
Director of Photography **Bert Glennon, A.S.C.**

Basically, "Juke Girl" is just another of those showcases for Warner Bros.' favorite stock company, presented with Bert Glennon's accustomedly efficient photography. But as the action advances, the technically-minded will find plenty of details to interest them, regardless of whether or not the story does. Chief among these details is the handling of the climaxing lynching sequence, both by Glennon and by director Kurt Bernhardt and film-editor Warren Low

Glennon's effect-lightings in this sequence are particularly good, and the rhythmic handling of direction and cutting make the sequence one worth studying.

KATHLEEN

Metro-Goldwyn-Mayer Production
Director of Photography **Sid Wagner, A.S.C.**

There's often a great difference between conception and execution; one may easily be at fault while the other is flawless. "Kathleen" is a case in point. Sidney Wagner, A.S.C., has given the production a photographic mounting which, from the standpoint of execution, is beyond criticism. He has made his scenes excellent examples of fine, modern major-studio photography. He has presented his players to excellent advantage. In fact, he has done—and done very well—everything that is called for by the conception of the story which evidently pleased director and producer.

But to this reviewer, at least, that conception is basically wrong. It lacks visual imagination in presenting a story which is to a great extent based on the imagination of the central character. Despite a somewhat hackneyed plot, the story has at least one clever premise: it visualizes the rather high-flown imaginings of an adolescent girl, and then follows them with a presentation of how the action she had just been day-dreaming about happened in prosaic actuality. Both the writing, direction and playing of these day-dream sequences are cleverly handled. But the photography is not. Visually, there is nothing to differentiate the imagined from the real except different dialog and action. Yet it would be so easy to have handled the photography of these dream sequences to have given a visual impression of the idealized unreality of a young girl's dream—! Had this been done, we'll wager the picture would have seemed a good deal more significant to the many lay reviewers who, as it is, dismissed it with the sort of faint praise which is so embarrassingly damning. We can't help wondering why, with the aggregation of pictorial talent MGM boasts, this sort of treatment was not carried out, or why, perhaps, Wagner was prevented from using what any cinematographer must naturally have visualized from a single reading of the script

THE FLEET'S IN

Paramount Production
Director of Photography **William C. Mellor, A.S.C.**

Cinematographer Mellor has given this production what the trade-paper reviewers like to term "a 'class' mounting." There's a deft polish to his work which is rapidly becoming almost a trade-mark for this rising young cinematographer. Without striving to be overly pictorial (which would be out of place in a production of this type) he manages to make the most out of every set and scene, and subtly to convey the impression that it's definitely an "A" production. His lighting of even some of the less photogenic sets is a factor that adds measurably to the production

His treatment of the players is characteristically excellent. If Dorothy Lamour has ever appeared to better advantage, we've unfortunately missed the film in which she did so. Yet in obtaining this effect, Mellor hasn't in the least sacrificed any of the other players

The directorial handling of the film—always a difficult point in making a filmusical—makes one doubly regret the passing of the late Victor Schertzinger, who surely had a unique touch in directing musicals. The way he and Mellor have interwoven the musical and specialty sequences with the dramatic part of the production is outstanding. However, in the specialty dance by Lorraine and Rognan, the work of either director

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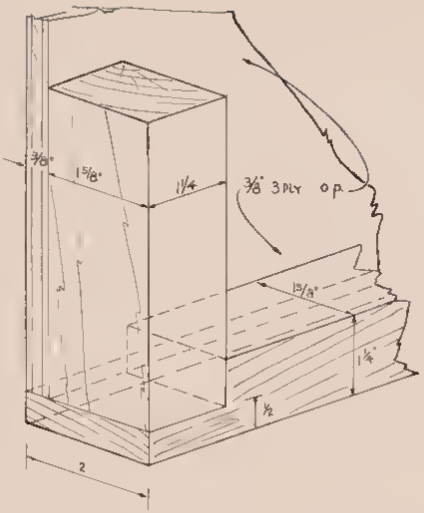

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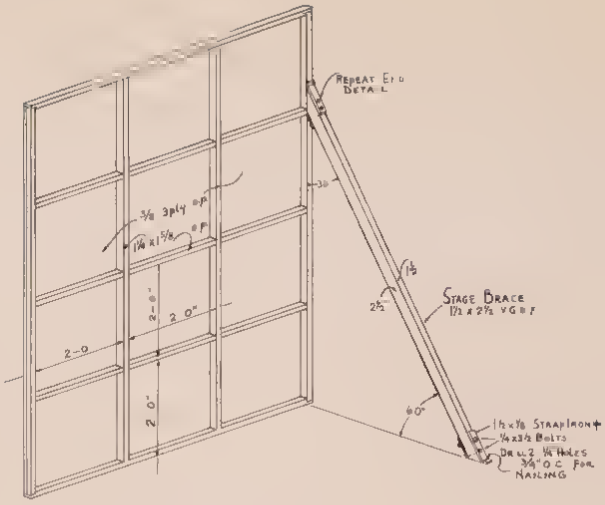

·Rear View·

Isometric Drwg of 6'0"x8'0" Studio Flat

Simplified Set-Building For Defense-Film Makers

By JACK OTTERSON

Supervising Art Director
Universal Studios

NOW that amateur movie-makers are turning their attention increasingly to the making of Civil Defense films, they're finding themselves faced with a problem most of them have never had to consider before—set-building. You can't very well set off an incendiary bomb in your living-room just to get a picture; neither can you squirt hoses and chemical fire extinguishers around to show the approved fire-fighting technique—and still remain on good terms with your wife. So the building of sets for scenes like this becomes a necessity. And once you've tried it, you'll find that for almost any other type of serious scenario filming it's a decided advantage to use a set, rather than an actual "practical" interior. You'll be able to light things more effectively; you'll be able to get more effective camera-angles; and you'll find you can build your set specifically to suit the needs of action and composition, rather than adapting them to fit the limitations of an existing room.

Building sets isn't nearly as difficult a proposition as it first seems. It isn't particularly expensive, either, for if you follow professional practice you can build your sets of simple, standardized units which can be rearranged, reassembled and redecorated to give you years of service with a surprisingly small first cost.

The secret of professional set construction is the use of "flats." These are standardized wall-panels which, with the addition, where necessary, of equally standard panels with doors, windows, etc., can be assembled to make a room of almost any size or shape you want. Once assembled, they can be painted, papered, or given almost any desired appearance, and mouldings, cornices and similar trim can be applied as effectively—and even easier—than on the wall of a real room. And as every studio in Hollywood has proven, they can be disassembled and stored, and re-used time and again, each time giving the visual effect of a completely new set.

The beginning of a "flat" is a piece of plywood. Officially, it's 3 ply veneer. And like all lumber, it comes cut into sizes which are multiples of two feet. The handiest size to use is a panel four feet wide by whatever height is suitable for the widest-angled long-shot you propose to make; 8 or 10-foot height is usually adequate, though of course you can go higher if you want to.

On what will be the back side of this panel, nail a rectangular rim of heavier boards—2x2's, though the stock we use professionally for this actually measures 1¼x1⅝"—and reinforce things with horizontal cross-braces (also 2x2's) every two feet. And there's your flat!

Give the front side a good coat of shellac (if you can still get the shellac!), and your flat is ready to use.

However, it won't stand by itself, and even if you assemble several flats to make an L-shaped two-walled set, you'll need some bracing. A six-foot length of 2x2 will provide this. Mortise off the ends at an angle so that the brace can be used at about a 45-degree angle between the floor and the back of the flat. Then fit the ends of your brace with six-inch strips of fairly heavy strap-iron, bent to the proper angle and fitted with holes at each end through which nails can be driven respectively into the frame of the flat and into the floor.

If you want doors or windows in your set, you can use either of two possible methods. In either case, you can get real doors and windows, with the necessary sills, mouldings, etc., from your local lumber and millwork company, or very probably pick them up used from a house-wrecking firm very cheaply. Then you can either mount them in special, permanent flat units a few inches wider than the door or window in question, or you can put them into place as necessary, between two standard flats, and with the wall-space above and (in the case of windows) below filled with special sections built like a regular flat, but shorter. Of the two, the first method is probably simpler and more practical.

If you want to make a set representing just a single wall of a room, take enough flats to give you the desired width for your set and put them together, edge to edge. Prop them solidly upright with the 2x2 angle-braces you've already made, and nail the sections firmly together with nails passing through the two adjacent frames on the back of the flats.

For this, and most other nailing in assembling flats and their braces into sets, use the special double-headed nails we use in the studios for this purpose; they're often called "jew nails." In appearance, these are like ordinary, fairly heavy nails, but they have two heads, one above the other. You drive the nail in up to the first head, getting a good, solid fastening as though you had used an ordinary nail. But—when you want to dismantle your set, there's the second head projecting about a quarter of an inch above the plank, so you can quickly yank the nail out without damaging either the wood it is in or the nail itself.

To cover the gap where two adjacent flats join, apply a strip of heavy finishing-paper—or a strip of paper tape or even butchers' wrapping paper if you can't get what we use—to cover the joint. We often use this "blank stock" to paper over the whole surface of the flat before finishing with a coat of paint or paper.

Now you can paint or paper your set-wall in any way you want. In the studios, we usually use a simple water-color paint, rather like kalsomine, in any desired color. This can be washed off by simply applying water. If we want to reproduce a plastered or stuccoed wall, we simply mix in a bit of sawdust, to give the necessary rough texture.

Any kind of wallpaper can be applied over a flat. With modern wallpaper, you can not only get the conventional wallpaper patterns, but flat colors, and special papers which imitate all sorts of other textures—wood panelling, tile, and even marble. You'd be surprised how many of the "marble" walls of movie banks, hotel lobbies, and the like, were simply "marbelized" wallpaper! And to the camera—even in color—they're every bit as convincing as the real thing.

As you use and re-use your flats, you'll find that often several layers of wallpapers can be applied one after another before the flat needs refinishing. When it does, hot water or steam, assisted by a good scrubbing, will remove the paper. Then re-shellac your flat, and it's ready for more use!

If you want to make an L-shaped, two-walled set, it is a simple matter, of course, to arrange two walls made of flats into the desired right-angle arrangement to make your set.

More often, you'll want a three-walled room. Of course you can do this with flats, too. Just arrange your wall-panels to make the necessary U-shaped set, and there you are.

With the exception of the railing, this set is built of standard 'flats.' Note how window-panel is recessed and corner treatment to give breaks in contour for better lighting. Notice also how lamps are hung on wall.

With this type of set, it is often a good idea to run a fairly sturdy brace (above the camera-angle, of course) across the open end of the U. This has two advantages. In the first place, it makes your set more rigid. In the second place, it gives you a scaffold from which you can hang lamps for overhead front-lighting.

Sometimes when you're working in a set like this, you'll find you have to reverse your camera-angle, and shoot toward what would be the open end of the U. For this, we use what we call a "wild wall." For that matter, we use "wild walls" often enough to provide the second or third wall of a two- or three-walled set. A "wild" wall is simply a wall of a set which is built as a unit, separable from the rest of the set. Put in place, it completes the set. But by merely pulling out a few nails and removing the supporting braces, the wall may be removed to give the camera-crew more room in which to work. If there is any overhead scaffolding for the lamps, set and scaffolding are completely separate units, the wall may be removed without disturbing the lamps and their catwalk. For that matter, a "wild" wall may be—and often is—swung completely from one side of the set to the other, as needed, so that a single wall provides two sides of the set, according to the camera angle.

In most instances, you'll find it an advantage to plan things so that you can place some overhead lighting units (especially spotlights, if you have them) along the top of your set-walls to provide back-lighting on the players and some of the lighting on the set-walls themselves, as well. Professionally, we do this by hanging a railed catwalk or platform directly above the set-walls, but usually suspended by one means or another from the ceiling girders of the sound-stage. This catwalk may or may not be anchored in some way to the set; most often, it isn't.

But for amateur use, you'll seldom need to go to this trouble. Instead, drill holes in the upper framing of your flats, spaced about two feet apart, into which you can fit the bases of some of your lamps. Better yet, use clamp-on reflectors—if possible fitted with concentrating "snouts"—in which you can burn either No. 2 or preferably No. 4 Photofloods. And an ordinary step-ladder will give your electricians a chance to reach up to adjust these lamps as your cameraman may direct.

Often in closer shots you'll find you need some back-lighting from a lower angle than is possible this way. There's a professional gadget that fits this, too. Ours is made of metal, but with most amateur lamps, you'll be able to use fairly light wooden construction. The gadget is simply a fairly long pole with a hook at its upper end. The hook fits over the top of the flat, and the pole or rod extends down along the wall into the set, with a provision at its lower end for mounting a lamp which can be directed as necessary to provide the back-lighting you want. The cable feeding the lamp, of course, extends upward and over the top of the flat, safely out of camera-range.

Now a simple set that consists of straight, flat walls may be adequate for the action, but it isn't always conducive to the most effective sort of light-

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Left, flash picture during actual screening, showing projectors on front row of balcony, and loudspeakers flanking screen. Above, top: Projectionists Ralph Bowman and John Flakke at work. Note step-up transformer and voltmeter; middle, Soundman Roy Rieschl recording sound effects and music on discs to accompany films; bottom, Carroll Davidson, Arthur Anderson and President Ralph Sprungman kibitz while Fred Grabow checks editing of films for the show. Photos by Ormel L. Sprungman.

8mm. ON A 10-FOOT SCREEN!

By ROME A. RIEBETH

Minneapolis Cine Club

HOW large can 8mm. movies be screened? The Minneapolis Cine Club has proven that with modern equipment and skill this smallest-sized of home movies can be successfully given theatre-size presentation. The occasion was the Club's Annual Winter Show, where 650 guests in the auditorium of Minneapolis' Women's Club had the surprise of seeing 8mm. movies projected on a beaded screen more than ten feet in width.

The show-house was packed to the rafters as the 75 members of the MCC put on an epic performance to their audience. The show, a replica of professional film fare, made a name for itself with the audience and will be repeated again by popular acclaim.

The Minneapolis Club's membership, about evenly split between 8 and 16 millimeter camera owners, has for the past five years made amateur movie history with their well planned and executed 16 millimeter showings. But heretofore the technical difficulties had always banned an 8 millimeter show.

Undaunted by this factor, the "eights" decided that it was possible to present their film to the public and they called on the finest technical advisors to help them.

Movie-wise semi-professional and professional film-makers laughed at the idea and said that it couldn't be done, and if tried the show would be a definite flop.

Stubborn members took up the cudgel to prove to the world that the experts didn't know everything. The accumulated knowledge of the amateurs was pooled to bring into being one of the first 8mm. showings of theatre calibre in the country.

Primarily it was decided that no concession would be made to quality and that titles, pictures, sound equipment and presentation would be of the finest . . . or else.

A screen size of 10x12-ft. was decided on as the most suitable from the viewpoint of the spectator. Using this as a starting-point, the technical side of the show was worked out.

There was plenty of excellent film available in the libraries of the 8mm.-shooting club-members, and it was only a matter of picking and choosing to select the best and most suitable film for public presentation.

This was old stuff to the group and a well-edited show was put together in jig time, musical scores arranged and sound-effects added.

The entire "sound-track" was then scored on acetate disc records, and the show was ready to roll.

A critical group gathered in the darkened auditorium of the theatre to check the final details of the show theme, and made sure the equipment was readied to meet any technical difficulties that might be experienced.

The sound-equipment used was for the most part manufactured by the members themselves. It was chosen over professional equipment because in many cases it incorporated more advanced ideas. The "sound-track" met all expectations and was accepted by the group. But the speakers used were unsatisfactory, and again a member's private theatre was raided to obtain first-class equipment.

The projectionists, who had worked out every angle of their job with an eye to complete visible entertainment, were disappointed in the power of their projectors.

The projection committee had done considerable experimenting with a couple of Eastman Kodak model 70-D projectors, and decided that special lens equipment would make these suitable to the show's needs.

Heavy lamps, giving 750 watts of illumination were obtained and special lenses were tried. The screen was located 70 feet away from the projection-booth and it took everything the projectors could give to enlarge the picture to the proper size and still maintain brilliance.

After considerable work with special lens equipment it was finally decided to turn back to the original lenses furnished with the machines.

The image projected was of the correct size, and the only thing lacking was the snap and brilliance usually associated with beaded screen projection.

One of the projectionists suddenly had

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Testing the Auricon Sound-Camera

By WILLIAM STULL, A.S.C.

Left with Val Pope at the camera and Ray Fosheldt directing, Walter Bach mixes sound for a 16mm talkie scene. Center: the mike boom swings the microphone in to record dialog as the camera films a two shot. Right: Ray Fosheldt and Val Pope check the lens before making a scene. Photos by Harold O'Neal

ALL too often there's a world of difference between a manufacturer's demonstration-reel of a new equipment like the Auricon 16mm sound-camera, and the way the same outfit will perform in actual field service, in the hands of people more interested in making a picture than in turning out a perfect example of substandard sound-recording. Not that the manufacturer will necessarily cheat—but the difference between the controlled, almost laboratory conditions under which most demonstration tests are most conveniently made, and the far less controllable conditions of actual service can easily make things embarrassingly misleading, whether you view it from the manufacturer's or the buyer's viewpoint.

For this reason, when the opportunity presented itself to make a test of the newly-developed Auricon sound-camera, under conditions of my own choosing, I naturally leaped at the chance. In the demonstration reels I had seen, the outfit had performed unusually well, giving an excellent picture, and sound a great deal better than any one has a right to expect from single-system 16mm recording. What would it do under conditions comparable to those that might be met by an amateur or semi-professional group making a picture for Civil Defense purposes?

In mid-April I had been invited to take charge of a meeting of the Long Beach (Cal.) Cinema Club, choosing my own subject. As this Club had just completed photography on a Civil Defense picture which was to be released in sound, I decided that the group would be interested in hearing for themselves the latest developments in 16mm sound-recording. As the very latest thing in this direction was the new Auricon camera—the first such outfit engineered for serious professional and advanced amateur use, yet marketed at a price comparable to that paid for a first-class 16mm silent camera—I was anxious to include it.

The E. M. Berndt Corporation very kindly placed at my disposal the first of their new cameras. The Photo Research Corporation granted me the use of their small studio. And with the aid of the group from the Long Beach Cinema Club who had been active in making the Club's incendiary bomb production, we made a little 200 foot Kodachrome talkie which deliberately put the Auricon camera over the bumps rough-shod.

Let it be said here and now that the new camera emerged with flying colors (no pun intended!) despite the fact that the cards were stacked against it in plenty of ways. In the first place, the studio—intended primarily for still-photography and demonstrations of the use of the Norwood exposure-meter—was not soundproofed. Its acoustics could have stood a good deal of improvement, too. And instead of taking the safe and simple course of making a single set-up, as nearly as possible perfect for both picture and sound, and moving our actors in and out of it, we deliberately broke our 200 feet up into no less than eleven completely different set-ups, shooting exactly as we would with a silent camera. Improvising continuity, dialogue and business and we went along, we made the whole picture in less than three hours.

The only "break" we gave the sound was that we used our microphone on an overhead boom, professional-style, instead of on a floor stand, and that we let the Berndt organization's Walter Bach, who brought the camera, do the sound "mixing." But before the evening was out, any of several of the amateurs present, who have added to their movie-making hobby that of home-recording on acetate discs, could probably have done quite as well.

Since our problem was to give to each

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Three of Maurine's screen closeup portraits. Notice lighting and effect of animation

Go to the Movies—If You Want to Learn Lighting

By HAL HALL

FOUR years ago the girl who was "stand-in" for Jeannette MacDonald had an idea. She decided to do something about it. As a result of that idea and that decision, she is no longer an unrecognized stand-in, but has become Hollywood's most famous woman portrait photographer.

The girl is Maurine (all the name she's found professionally necessary since the great and near-great began beating a path to her studio door) and the idea that started it all was that portraits—especially of picure personalities—shouldn't be presented with the old-fashioned, conventional "portrait lighting,' but given the same treatment you'd see in a motion picture close-up photographed by an ace Hollywood director of photography.

In four years that idea and that technique have put her on the photographic map in a town where conventional portrait photographers come at less than a dime a dozen. No wonder she advises photographers, professional or amateur alike, to adopt the same method. In other words, to study the art of portraiture in its best modern application by going to the neighborhood movie house and observing what the masters of motion picture photography do in the way of lighting and posing when they photograph a motion picture star for the screen. But let Maurine tell it herself.

"Before I became a stand-in for Miss MacDonald," says Maurine, "I was tremendously interested in photography. I hadn't been working as a stand-in long when I found myself trying to figure out

Maurine and her camera

why the cameramen and electricians were changing this light, turning on that, putting a silk over this one and spreading the light from another lamp. I began asking questions. All the cinematographers—Bill Daniels, A.S.C., George Folsey, A.S.C., Clyde DeVinna, A.S.C. and the rest—were very cooperative. They told me the reasons for the various ways in which they were arranging their lights. They explained why a high key had to be used for one mood and a low key for another.

"I never bothered asking the 'still' photographers questions, for I had an idea that no still photographer ever got the results that were attained by the cinematographers in their closeups. That was what intrigued me, for I couldn't see why, if you got an effect in a movie, you couldn't duplicate it in a still. Finally I began to learn a lot about lighting, so much that when I was standing in for Miss MacDonald I would frequently save the cameraman and gaffer many steps by telling them a light was hitting me too hard from one angle or that another one was in the wrong place.

"Well, this went on for four years. One day a cinematographer asked me why I didn't become a portrait photographer. I didn't answer him right away. But within five minutes I had made up my mind to quit being a stand-in and to become a photographer.

"I quit work the next day, looked around for a possible location for a studio. A friend gave me an old portrait camera which had no shutter. I made a cardboard shutter, and it worked. I found a one-room place, moved in with the old camera, two borrowed lights—and when I hung up my sign I had a total bank-balance of $3.75. But I also had my idea that if I could give screen close-up quality to my portraits I would be a success.

"Well, I did $350.00 worth of business my first month. Each month thereafter I did better. I did no advertising, but the people who came to me told their friends about how their pictures looked like screen closeups. That sent me business. And then one day Myrna Loy came to my studio. For that sitting I received a check for $1000. I knew I was on the right track, so built a darkroom to celebrate!

"It really isn't difficult to make portraits that have the screen-closeup style. I know nothing about the technical terms of photography. As a matter of fact, I have never read a book on photography or lighting. I don't believe I could give a technical definition of composition to save my life. But I do know when a picture

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Spadework and spraying are important —to the garden and to the picture

Note use of reflector in making closer shots. Below Kodachrome climax—the harvest of colorful flowers and equally colorful vegetables

Filming Your "Victory Garden"

By WILLIAM F. KRUSE

THOUSANDS of amateur movie-makers employ their No 1 hobby to keep a permanent record of the joys of their other pastimes. Hunters become wildlife photographers, yachtsmen go in for marines—and then they and their kind give advertising managers good reason to write a whole series of camera ads around the theme of "Movie Making Opportunity No. 1492," showing lovely ladies and other hobby highlights, as lure for more and better film exposures.

Other movie-makers use their hobby in the service of their jobs,—engineers, doctors, teachers, explorers, and many more. Maybe it should cloud their strictly amateur standing, in the manner of de-emphasized collegiate football amateurs—but not always is their photography good enough to warrant such a ruling. Maybe the whole amateur idea is a dodo, anyway, and everybody should be judged by the quality of his work, whether or no he collects his reward in pay-checks, expense vouchers or pretty ribbons! Some of these semi-pro amateurs are really *good* cameramen, and good at telling a story with film, too, because they really know their story, and they know why it needs telling.

A case in point is James H. Burdett, his avocation—movie-maker. That should always come first. His vocation for many years has been to direct the work of the National Garden Bureau, which is dedicated to the noble aim of making ten useful plants grow where only one half-hearted seed sprouted last year. And his avocation has always tied in beautifully with his job which, maybe, makes him a semi-amateur. But not his films. Nothing "semi" about those lovely Kodachromes of flowers and vegetables, and their human worshippers! The pictures are really good.

Came the war. Vocation, avocation, all had to be tied into the national need, by friend Burdett as by all other Americans. To his other jobs he had added the editorship of a daily garden column in Chicago's brand-new "Daily Sun," a fine column, by no means the least of the fine features of a fine new journal. And of course the column soon beat the tom-toms for Victory Gardens, and lots of them.

Burdett and some of his neighbors had been gardening for victory for many a year. It's the kind of people they are. And they had been making motion pictures of the process, interesting, human, beautiful films, that showed every step in the process of making a good garden grow good vegetables and flowers. They had taken their movie-making no less seriously than their gardening. Each shot was a story-telling picture. Composition was good, exposure likewise, and lighting sometimes something to write home about. The accompanying pictures tell why, to some extent. "Flat lighting only for Kodachrome" may be a good rule for average amateurs, but not for crack photographers with a message! Anyway there is no rule against reflectors, even in Hollywood. So Burdett used reflectors—to light up a pretty gardener's latest crop of sunburn into color temperature harmony with her first crop of tomatoes. Or something.

Conversely, too, where there was too much color, too many centers of interest, he introduced the complementary-colored neutral background. In plain language, he was ruthless enough to make a pretty model block herself out of a picture intended to emphasize the mere flowers she had just picked, by holding a background cloth that gives a pleasant color-contrast. Such determination is the mark of a real photographer. Most cameramen I know would have blocked out the flowers!

All kidding aside, this is an important, well-made film. And timely! In days of old, when wars were fought by professional armies and the rest of the nation tried to follow the line of "business as usual," one of the greatest generals said bluntly that "an army travels on its stomach." Nowadays, wars involve whole peoples, and the national bread basket looms equal in importance to the munitions chest. To be sure, it takes more than food to win a war, but it is equally certain that any nation that

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Applying The Newsreel Cameraman's "Sixth Sense" To Your Own Movies

By JAMES R. OSWALD

Frame enlargements from Mr. Oswald's quickly made newspicture of the celebrated "Tulip Time" Festival.

A MOVIE should be planned well in advance of the actual filming, so the experts tell us. This is undoubtedly a wise procedure to follow, when possible, for those who want good continuity in their films. But how often have you spent a great deal of time outlining a script or a mental picture of the desired results? Again, how often have you been disappointed when the time came to do the actual filming, because of certain circumstances impossible to foresee? I'll venture to say every photographer has suffered these disappointments many times. Vacation movies and pictures taken in new surroundings present this problem in particular. With this thought in mind, one can help remedy the situation by learning how to make the most of conditions as they arise. You will reduce editing to a minimum and still retain a pleasing sequence arrangement if you will develop what I have termed, a "photographer's instinct." It's the same "sixth sense" that enables a professional newsreel cinematographer to "cover" a news story "cold"—without benefit of a script—and bring back a complete picture-story of the event.

Based on my own experience in filming the famous "Tulip Time" festival which is held annually in Holland, Michigan, at the peak of the tulip season, I found this so-called "instinct" invaluable. I believe the conditions under which it was filmed are similar to those encountered in nearly every unplanned movie.

Arriving in Holland one bright morning with all the usual photographer's paraphernalia, including a plentiful supply of Kodachrome, my first move was to take the short drive to the celebrated tulip farms which were destined to play no small part in my production. Acres of blooms of every color, all planted in orderly rows, enough to delight the heart of every garden lover and photographer alike! What would make a more appropriate opening for my film? I angled the camera for a long-range shot from a high vantage-point for my introductory view. This completed, a few breath-taking close-ups and semi-closeups soon suggested themselves as the ideal follow-up scenes. But first a couple of medium-shots to make the approach to the flowers more gradual for my future audiences. Next, I planted the camera firmly on the tripod, now only a foot or two above the ground. I buzzed away as the tulips with their contrasting green foliage swayed slightly in the breeze. As I peered through the viewfinder, I could already picture the colorful blooms filling my entire movie screen. A few similar scenes were intermixed with shots of the crowd of awe-inspired flower-lovers examing the buds. I then hastened back to town for the big festival program which was already under way.

Once again in the center of activity, the next step was to make mental notes of choice viewpoints and lighting conditions for the events which were to follow. To climax the film I selected beautiful Centennial Park as the most pleasing background for my parade scenes. Natives of all ages in their gay Dutch costumes, complete with wooden shoes, presented ample opportunity for interesting sidelights. I made the most of each opportunity, quickly but carefully choosing the best camera angle and locating the tripod firmly for rock-steady pictures.

As tiny drum majorettes began to twirl their batons in rehearsal for their big show, I knew it was also the cue for mine, and once again swiftly swung into action. With the crowds gathering thick and fast, I hurried back to my established "base" which I previously had chosen to hold for the parade scenes. The camera, once more on tripod, was aimed directly down the street, at an angle such that the marchers would walk into and across my picture. From my place on the parkway I was all set to "shoot the works."

Beginning with the approach of the motorcycle escort through to the last participant, the entire sequence was filmed most effectively with more than a quick glance at a passing parade. No attempt was made to swing the camera in order to follow the marching, and only once was the angle of view changed. The results proved this procedure wise. From the majorettes' bright satiny uniforms to the blue and pink costumes of the men, my viewfinder—and later my screen—was filled with gayety and color. Holding the exposure button to catch the motorcycle police bringing up the rear and the usual gathering of children following, was well in order. A few shots of the crowds breaking up and leaving

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A New Twist To A Garden Scenario

By LEWIS B. REED

The flowers that bloom in the spring have nothing to do with the case except to prove even a wacky arrangement can make an interesting composition
Photo by Herbert P Bond

IT was Saturday afternoon The sky was filled with California "liquid sunshine" There I sat with my new camera, a roll of Kodachrome, and a finger itching to push the camera-button My thoughts were bitter as I looked out on the moist landscape It was just my luck to get a new camera and then have it rain! Still, something had to be done to try out that new camera In the war-bag were two daylight photofloods, which I had used for shooting color titles; only a small subject was lacking. Looking around the room I saw the most recent peace-offering to my wife—a large bouquet of mixed cut flowers They were exceedingly colorful, fairly compact, and could be used in different arrangements. Everything was set to try the new camera

The flowers were put on a small table in front of a window, so the daylight could be utilized for back-lighting, and the photofloods placed in the conventional forty-five degrees lighting position A waste of film you say? Could be, but I remember hearing a noted authority on photography say it was possible to tell a story with moving pictures using only a statue as the subject Anyway it was absolutely necessary to see what that new camera could do!

Shots were made of the flowers collectively and individually. In front of a mirror, and on a mirror In pieces of pottery Floating in water In every way that could be imagined No story was told, but a fine variety of cut flower shots were obtained, and it was found excellent dissolves could be made with the Eastman eight millimeter magazine camera

You don't want to waste film taking what amounts to still pictures of flowers? You are right! Only why didn't you think of that on your last trip? Remember you returned with a lot of shots which were the same as stills? If you do it on trips, you might as well do it at home and save your tires!

The flower shots interested me. They had color, some originality, and gave me a clue to a method of practicing composition They interested me so much that I finally decided to give the much publicized garden sequence a new twist, and see if it wasn't possible to make something new in a "family at home" scenario

My wife is a flower arranging addict Flower arrangement doesn't mean a bunch of flowers dumped into a container, then pushed around to give a well-balanced appearance It is a study in composition of simple, earthy objects A successful composition can be made with a twig Every angle will tell a story Purchase a book on the subject and discover a new hobby, one that is inexpensive to follow (My wife makes them from weeds and sticks)

After practicing the various basic principles of composition, you will find that all your other shots will benefit by your added knowledge Instead of jumping out of your car and filming a desirable scene from the spot you land on, you will spend some time in properly framing and viewing the scene Your shots will be more pleasing, lots of uninteresting shots will be passed by, and you will find film lasts much longer.

Filming chances are restricted today Tires, cost of film, censorship, etc., all are limiting factors Home means much more to us today than it did before. Let me suggest a scenario which is simple, needs no elaborate setting, is instructive, and stars your home and family There are chances for originality in arranging scenes and lighting. You can work on it night or day, quit when you want to, and take as much time on each shot as you desire

Main Title "Story of An Arrangement"

Note—All indoor shots should be made within six feet of the subject. This for two reasons (1) All unnecessary background is omitted (2) The arrangement is the subject. Close ups will bring out every detail.

Scene 1 Build a flower arrangement from the bare receptacle to the finish Vary your camera angles or use stop-motion to prevent monotony

Scene 2 Show a series of arrangements in different parts of the house. Use mats to vary the backgrounds, or pieces of small pottery to add interest The number of arrangements is limited only by your imagination.

Scene 3 A woman's hands are shown giving the last deft touches to an arrangement.
Dissolve to her hands digging in the garden

Scene 4 Continue with the old familiar garden sequence of hands planting, cultivating, etc Show the garden growing from week to week

Scene 5 A series of shots showing the harvest of flowers They can be still growing, or cut and held
Closeup of one particularly fine group
Dissolve to the same flowers, now indoors, and in an arrangement.

Title The End (This could be faded in over the final scene.)

It is not necessary to use flowers in the foregoing. Vegetables from your Victory Garden could be used equally well At any rate, I hope that this idea will at least suggest the filmic possibilities of your own home and garden In any case, try flower arranging as a means to improving your eye for composition Don't be afraid No one has accused me of being a pantywaist yet!

END

National Association Of Movie Clubs Gets Action!

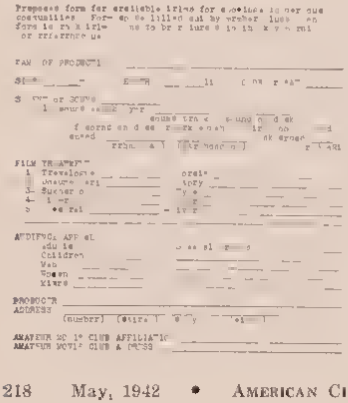
WHERE HAVE YOU MADE PICTURES?

The United States Government has asked us to place before our readers an urgent request for both still and motion pictures made anywhere outside the United States, as a vital aid to the Nation's War Effort. These pictures will be reviewed by Government authorities, and selected scenes duplicated by the Government. The original films, plates, transpareneies or negatives will be returned, intact, to the owner.

This request is addressed to BOTH PROFESSIONALS AND AMATEURS, and to STILL PHOTOGRAPHERS, as well. Size and condition are relatively unimportant: 35mm., 16mm., 9.5mm. and 8mm. films are desired, as are still photographs (negatives or prints) and transparencies of any size. DO NOT ATTEMPT TO JUDGE WHICH OF YOUR PICTURES WILL OR WILL NOT BE USEFUL. Do not jump to the conclusion that just because you have "ordinary travel-shots," they may not be useful, or that because your pictures were made some time ago, or are of poor photographic quality, they will not be acceptable to the Government. Locale and subject-matter, not photographic quality, are the vital factors.

If you want to cooperate in this with your Government, fill out the form on the opposite page, or describe your pictures more fully in a letter, and mail it to the Editor of THE AMERICAN CINEMATOGRAPHER, 1782 N. Orange Drive, Hollywood, Calif.

DURING the past three months editorials in the "Among the Movie Clubs" department of THE AMERICAN CINEMATOGRAPHER have presented the idea (originated by George Burnwood of Philadelphia's progressive 8-16 Movie Club) of a National Association of Movie Clubs. Among the advantages for such a federation of clubs would be the immediate formation of a national amateur film-exchange through which both club-made productions and the films of individual members could be circulated among the member-clubs, national and regional competitions for both clubs and individual films, interchange of stock-shots between clubs or individuals in different parts of the country, and the pooling of equipment and talent when necessary for the making and showing of Civil Defense films. We're ready and willing to put the full force of THE AMERICAN CINEMATOGRAPHER behind such a project, all we ask is that the clubs concerned and their officers show us that they really want to see the plan in operation, and are willing to cooperate too.



That cooperation is already making itself felt. Officials of the clubs from coast to coast have written in to tell us they approve the idea, and will help get it rolling. Some have even started meetings among the clubs in their vicinity to start the ball rolling with local contests and plans for regional federation. Others have offered films, and advanced suggestions from their practical experience in inter-club program exchanges.

Quite properly, Philadelphia's 8-16 Club leads the parade. Club Secretary Harry Brautigam writes us to say, "The officers and members of the 8-16 Movie Club of Philadelphia wish to thank you for your kindness in mentioning in your magazine our Mr. Burnwood's idea for the formation of a National Association of Movie Clubs.

"We feel sure that under the sponsorship of THE AMERICAN CINEMATOGRAPHER such an association could become a reality.

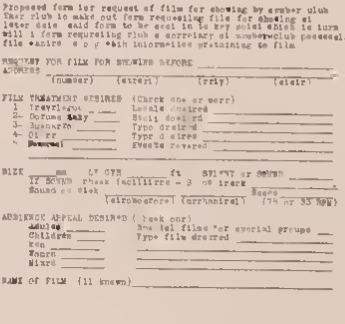
"As a start, we enclose a list of films we have been exchanging with other clubs, and for the benefit of those we have not contacted, we offer this list of pictures and invite correspondence from Club Secretaries.

"In order to start the ball rolling regarding the National Association, we are contacting the clubs in the near vicinity of Philadelphia, asking them if they would be interested in joining in an inter-club film contest. We contemplate holding a meeting of representatives of the various clubs to arrange for the contest, and would then have an opportunity of discussing the National Association. In this way it is possible we may be able to form the nucleus of such an association. If other clubs throughout the country were to do likewise, it should go a long way in getting the idea under way."

Frank Heminger, also of the 8-16 Club, adds to the discussion and volunteers some very useful service. He writes "In our magazine, 'Closeups,' we have persistently stressed the benefits possible through greater inter-club cooperation . . . For several years we've effected inter-club exchanges on an informal basis. By 'informal' I mean that the knowledge of new club members has been gained mostly by chance. When we learn of the existence of a new club production, our 'exchange man' contacts the club and offers our own pictures as an inducement. Let me say, incidentally, that these valuable original prints are handled carefully. Ours show no defects after two years 'on the road.'

"Your magazine can do a real service for movie clubs by reviewing these productions and reporting, in a single, short paragraph, their running-time and general content.

"In conjunction with the above-mentioned reviews a central exchange could route the films to the associated clubs. This route could include all of the clubs in a definite order, or could be made up of clubs that indicate a desire to see a



particular film reviewed in your magazine.

"While such an exchange should be centrally located, I'll offer to run it if no one in the Central States can undertake the job. The films themselves would not be handled by the exchange, and little expense would be incurred since most of the mail would be incoming. Route schedules can be posted along with 'Closeups' each month, and also sent along with the film cans."

THE AMERICAN CINEMATOGRAPHER will certainly be glad to follow Mr. Heininger's suggestion and review films available for inter-club exchange, if their makers will send them to us. And we certainly thank him for volunteering as he has to help get things started. His address, to those not on "Closeups'" 60-club mailing-list, is 2030 West Tioga Street, Philadelphia.

President Lisle Conway, of the Syracuse Movie Makers Association also offers some highly practical suggestions, and volunteers active help. He says, "We would like to volunteer our services in starting and promoting the idea—although to be frank we have no information or material upon which to start. However, here are a few ideas of my own which might help to form a basis upon which such an organization could be founded.

"All amateur movie clubs interested in such an organization could contact a key point (which could be selected by them—another conveniently-located club, or possibly your magazine) and give this key point such information as films which might be used for exchange purposes, films which they would like to see; 'stock shots' they have or could make might be given or sold; and 'stock shots' needed by members, questions concerning various phases of amateur motion picture photography which some other club might have already worked out (such as the accurate synchronization of sound to amateur movies by means of stroboscopically synchronized discs, etc.). This key point would then serve as a clearing-house and storage point for the elements of these offerings, and would refer one club to any other that might be able to offer the required assistance or exchange.

"By this means, a catalogue of exchange ideas and exchange films of the entire country could be set up, and when cross-indexed would furnish amateur movie clubs throughout the country a valuable service. Any club desiring certain information, or wanting a certain type of film to show at a meeting on some particular subject could contact the key point and they would then be referred to a club or clubs that would have authoritative information or the films on the subject wanted. From then on it would be up to the secretary of the first club to make the necessary arrangements with the secretary of the second club or group of clubs to effect the actual exchange of films or information.

"In addition, from time to time bulletins might be sent to the member clubs regarding timely topics, changes of importance that might affect them, requests for films of disasters or news events taking place in any one part of the country, and so on.

"Such an organization should operate on a non profit basis, as practically all amateur organizations now operate. The only expense involved would be the postal and minor operating expenses, and when these would be split up with the various clubs participating the tax on each club would or should be negligible.

"No doubt there are many more suggestions which could be advanced by officers of other clubs to improve the idea and make it more workable. Also there are probably many more services that such an organization could render the movie-makers of the nation—services we would all like to hear and know about. The ideas I have submitted are merely reflections of subjects we deal with in a small way in our Syracuse organization, and we hope that other clubs will come through with other ideas on the subject, so that something concrete may be started. In regard to any of the above ideas, if other clubs would like to have any of the information we've worked out, we would be only too glad to pass it on to them.

"In closing, we of the Syracuse Movie Makers woud like to express our hope that all of the organizations in the country will do their bit toward helping along a worthy idea."

Program Chairman Tom Griberg of the Tri-City Cinema Club (Davenport, Rock Island and Moline), which has already participated in a number of inter-club program exchanges, comments, "I think the proposed federation of movie clubs would be of great value to the poor,

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FOREIGN FILM INDEX

Name:_____
(Please Print)

City:_____ **State:**_____

Street Address:_____

I have the motion pictures or still photographs listed below. I am willing to send them for examination to any designated official of the United States Government, with the Government's assurance that they will be returned to me at its expense, and intact.

I agree to give permission, if requested, to the United States Government to make such duplicates as it may desire of any or all footage of motion picture films so submitted, or any or all of such still photographs, with the assurance that such duplicates will be used by the Government only.

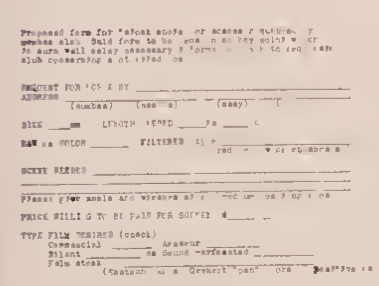
I am a citizen of_____

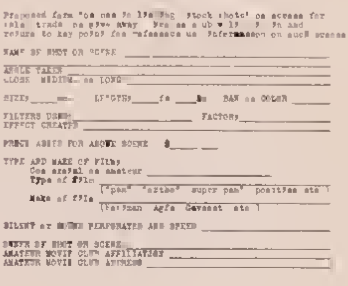
I have shown these films or photographs to the following Government agencies._____

Country	Date	Footage	Film-size	B & W or Color	Still Photographs

(Signature)

Date:_____





16 MM BUSINESS MOVIES

MORE THAN SHELTER

Documentary, 1200 feet black-and-white, sound.

Presented by San Francisco City and County Housing Authority

Produced by **William H. Abbenseth**; direct-16mm recording by **W. A. Palmer & Co.**

The term "documentary" is often used very loosely, and mis-used more often than not; but "More Than Shelter" is a genuine documentary—and an excellent one. It is a picture which forcefully brings home to the citizens of San Francisco the fact that while that region prides itself on being "the city without slums," it still harbors far too many buildings which though modern enough fifty or sixty years ago, are now so thoroughly deteriorated and over-crowded as to give a very accurate facsimile of slum conditions. And unlike so many documentaries, this picture does not stop by merely posing the question it shows what is being done to correct this condition, and thus ends on an inspiring note of hopefulness for the future

For what we understand to be his first attempt at a production of this magnitude, William Abbenseth has done a very fine job—one that shows very great promise for future achievement in the documentary field Technical flaws there certainly are, but they are balanced by a strength and forcefulness in direction, and a sincere factualness in presentation, which make "More Than Shelter" a film well worth seeing

From the technical viewpoint, the picture is a very commendable job of direct-16mm. all the way through The picture was photographed on 16mm reversal film, from which a dupe negative was made, with release-prints in turn made from this. There is, as might be expected, some loss in tonal values as compared to a reversal duplication job, but the overall quality of the laboratory work, done by Consolidated, is of the sort that is all too-seldom seen in black-and-white 16mm. There are some variations in exposure and contrast which might probably be more nearly equalized if the duplicate negative had been made to a lower gamma and a slightly lighter print made

The picture has an unusually interesting musical score, written especially for the purpose by Foster Cope and performed by the 75-piece W P A Symphony Orchestra under Nathan Abas In general, this score is surprisingly good, especially when it is considered that neither composer nor performers were apparently familiar with picture scoring In some sequences, however, it seemed to this reviewer that the music was a bit too modernistic and strident, and tended to distract attention from the visual phases of the picture In some other sequences—notably the rainy-day sequence in the slum, just preceding the tenement fire—the music should certainly have been better coordinated with the action In this sequence the pictured action—the repetitious drip, drip of water through a roof and into pots and pans—gives a cue for musical rhythm which should by all means have been followed

The recording is excellent. The score, we understand, was first recorded on acetate discs and then dubbed to film, while the narrative is direct-16mm. recording. We rather wonder why, in several scenes in which various of the slum-dwellers (both men and women) are shown asking why nothing is done about things, other voices than that of the narrator were not used. It would have strengthened the effect considerably

CHAMPIONS SIRE CHAMPIONS

News-documentary film on cattle-raising; 1200 feet Kodachrome, sound

Presented by Roy J Turner Hereford Ranch

Produced by **Ramsey Pictures.**

In view of the fact that this picture was rather obviously made under catch-as-catch-can newsreel conditions, with no opportunity of staging action or planning continuity, it stands as a distinctly creditable attempt. The producers have managed to give the picture a surprising lot of pictorial and production value

The picture as a whole gives a very excellent representation of a year's routine at this great ranch which specializes in the raising of prize winning Hereford cattle. Particularly interesting highlights are the newsreel-type sequences showing the annual cattle-judging contests in which 4-H and Future Farmers' youngsters participate, and the annual auction of blooded stock. In view of the difficulties involved in filming such events, producer Ramsey has done more than ordinarily well with this.

The color-rendition is excellent—a particularly important point in a film like this, where a slight difference in coloring (unnoticeable to the layman) can make a difference between a champion and a near-champion Ramsey has also brought in a number of pictorial shots of the ranch which are enough to make most of us totally revise our preconceived opinions of Oklahoma as a "dust-bowl" region

We still find ourselves in some slight disagreement with Ramsey as to the ideal technique for exposing Kodachrome, and as to the merits of 35mm.-reduction vs direct-16mm for sound, but none the less, the picture is an excellent one technically We hope, however, that some day the sponsor may have a chance to see "The Story of Linnetta," a very similar picture made in California some years ago, and realize the possibilities in dramatizing the career of a cow from calfhood to a Grand Championship.

MINNESOTA DOCUMENT

Documentary, 35mm., synchronized sound. Produced by the **University of Minnesota.**

Although the title of this picture lacks the glamor which its actual subject-matter might give it, "Minnesota Document" unfolds in monochrome a story of the growth and development of the State of Minnesota in a way that will be new and impressive to even the most sophisticated

Robert Kissack, Jr., head of the Visual Education Department of the University of Minnesota, directed the making of this 35mm. sound-film (produced under a grant from the Rockefeller Foundation), marshalled the historical facts about the state, and directed more than 750 non-professional actors in a film which portrays the growth of Minnesota in terms of human sacrifice, perseverance, and frequently avarice and greed.

His direction is good, especially when it is considered that none of the players were trained in acting before camera and microphone. This difficulty is especially apparent in the sound-recording, as some of the voices were rather low, while other speakers dragged their lines slightly Re-recording would probably do a great deal to help this phase of the picture

However, the producers of "Minnesota Document" have relegated the inevitable production limitations to a place in the background by excellent cutting of the film, and by the introduction of a specially-written musical score which sweeps the picture along with a really professional flourish.

Stark realism is the keynote of the camerawork, done somewhat in the manner of "Citizen Kane." The production-crew travelled to all parts of Minnesota to record the scenic, industrial and agricultural sequence, and received notable cooperation from business and civic leaders for the special settings required.

Paul Wendt was Chief Cinematographer, and Everett Miller recorded the sound, much of which was lip-synchronized. The musical score was composed by John Verrall of Hamline University, and the symphony orchestra was conducted by John Kuypers, of the same university. The film was produced at the University of Minnesota as a part of the work of a four-year experiment in educational film production under a grant from the General Education Board of the Rockefeller Foundation.

K O H

AMONG THE MOVIE CLUBS

Syracuse Keeps Busy

Projectors of the Syracuse (N. Y.) Movie Makers Association have been running pretty close to full time every evening with shows for civic organizations, Defense Film Shows, church, supper and U.S.O. showings, etc. The members get a great kick out of it, the Club gets a very good form of acceptable publicity, and (we hope) the hobby of amateur movie-making is furthered in this locality. It might be added that showings of this type to the open public have greatly stimulated the efforts of our members toward the improvement of their camera, titling, continuity and projection work.

LISLE CONWAY, President

Tri-City's "Nite Life"

The April meeting of the Tri-City Cinema Club (Davenport, Rock Island and Moline) was highlighted by the screening of an unusually varied selection of films. First was the film of the Club's Annual Dinner, as filmed by Vice-Pres. John Hoffman. Program Chairman Tom Griberg presented "Ginger at the Brookfield Zoo," (100 feet, 8mm black-and-white.) Dr. J. P. Johnston showed his 800-foot 16mm color-film, "Northern Vacation." Highlights of the evening were two very unusual films from the library of THE AMERICAN CINEMATOGRAPHER: "Jello Again," (200 feet 16mm. color) made with animated Jello boxes by Carl Anderson, and "Nite Life," (800 feet color, 16mm.) an unusual example of trick camerawork by J. Kinney Moore.

GEORGIA T. FIRST,
Secretary-Treasurer

Sound in Philadelphia

An exceptionally good 16mm Kodachrome sound-film opened the April meeting of the Philadelphia Cinema Club. The excellent coloring and unusual camera-angles of this fast-moving story of phosphorus held the interest of the club to the last shot.

The "eights" scored again in a quiz program contest conducted by our new program director, James Maucher. "Skating Vanities," a difficult subject to photograph, was well handled by our new Secretary, Robert Henderson. A film taken at the first Club picnic in 1936 was shown and turned out to be highly amusing to all. We have certainly progressed in our movie-making in those six years!

FRANCIS M. HIRST,
Publicity Officer

Oakland Tries New Paths

With the curtailment of picture-making possibilities in the Oakland area due to military restrictions, the Oakland Motion Picture Club has turned toward other fields to "keep 'em rolling." Member Byron Willifred is getting his camera ready to shoot a film on the industrial preparations made in a War-Industry plant which he is connected. Fellow club-members have agreed to help him on both script and camerawork.

President Chet Barnett has recently joined the ranks of the home-recording enthusiasts, with a dual-speed recording unit with which he plans to record music and commentary for his films.

Past-President Clyde Diddle has prepared a script on a subject which will be made in table-top fashion, to be shot at the next few gatherings as a part of the Club's meetings.

E. EUGENE LEONHART,
Director of Publicity.

Long Beach Cinema Club previews "Fire From the Skies" to Defense Officials. Back row: Director Roy Fosheldt; Maj. Theodore Enter, Chemical Warfare Service, U.S.A.; Lt. Babcock, Chemical Warfare Service; Walter Evens, Los Angeles County Defense Council Film Committee; Dave Olmstead, Long Beach publicist; Chief Allen C. DuRee, Long Beach Fire Dept.; Claude Evans, Chief Long Beach Fire Prevention Bureau; M. Kielsen, Mgr. United Artists Theatre, Long Beach; H. McConnell, Long Beach Press-Telegram; Charles Vickers, Coordinator Civilian Control Center; Capt. M. M. Clements, Long Beach Fire Dept. Front row: Cameramen Val Pope, Narrator Hazen White, Scenarist LaNelle Fosheldt, Mrs. Dave Olmstead, Capt. J. H. Wheeler, Training Div., Los Angeles Fire Dept.; Mrs. A. C. DuRee, Mrs. J. H. Wheeler, Mrs. Mildred J. Caldwell, the Club's Defense Film Coordinator; Saul Elkins, 16mm. Film Coordinator, Los Angeles County Defense Council; Councilman W. J. Brunton, Long Beach; J. A. Mulvey, Chairman Civilian Defense Control Center. The verdict: Long Beach's amateurs have turned out one of the best, if not the best incendiary bomb pictures made!

Metropolitan's Pan-American

North American extremes marked the program for the April meeting of New York's Metropolitan Motion Picture Club. First there was "Canada Calls You to Manitoba," two reels of 16mm. Kodachrome produced last summer by member Frank Gunnell with the cooperation of the Department of Natural Resources of the Manitoba Provincial Government. Next, jumping thousands of miles to the south, the members saw "Guatemala—Land of the Mayas," a 400-foot Kodachrome (16mm.) filmed in 1940 by member Ella Paul. Both films were accompanied by sound-recordings via the Club's dual turntables.

An April 10th, a delegation from the Club attended the Annual Show of the Brooklyn Amateur Cine Club, and several members showed films, by invitation. The M.M.P.C.'s own big show—the Annual "Gala Night"—was scheduled for the night of April 24th, at the Master Institute Theatre. Outstanding films, by Club-members and others, were shown.

FRANK E. GUNNELL.

Sound for Long Beach

Sound-on-film was the keynote of the April 15th meeting of the Long Beach Cinema Club. William Stull, A.S.C., Editor of THE AMERICAN CINEMATOGRAPHER, gave an interesting talk on the principles of 16mm. sound-on-film recording, and exhibited a 200-foot Kodachrome test reel made specially for the occasion with the new Auricon 16mm. sound-camera, with members of the Club's Defense Film Project as actors. He also showed 16mm. sound-films made by Mark C. Honeywell, in Florida, and an outstanding Kodachrome sound-film, "Over Pine Mountain Trails," an impressive record of on-the-spot activity in the lumber industry.

PRUDENCE BRAKLOW,
Secretary.

Washington S.A.C. Hears G-Man

Special Agent Milton Jones of the F.B.I. was special speaker at the April 20th meeting of the Washington Society of Amateur Cinematographers. He spoke on "Use of Photography in Connection with Laboratory Work Incident to to National Defense." Supplementing his talk, the March of Time 16mm. sound-film "Men of the F.B.I., 1941," was also shown. "Skyline Drive and Luray Caverns," a Kodachrome sound-film, as also a program feature. The Club plans to

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THE BULLETIN BOARD

Two New DeVry Projectors

Of particularly timely interest in view of today's greatly expanded use of sound-films for wartime employee and Civil Defense training is the recent announcement by President W. C. DeVry of the DeVry Corporation that his firm has developed two new portable sound projectors, available, it is stated, for undelayed delivery. The two new machines are the "Victory" model (16mm) and the "Liberty" model (35mm.) It is stated that both models conserve vital war materials without sacrificing, and in some instances even improving the quality, durability, dependability and performance of pre-war DeVry models, and with no appreciable difference in weight. More complete details of the new machines may be obtained from the DeVry Corp., 1111 Armitage Ave., Chicago, Ills.

Film on Japs Ready

"Know Your Enemy—Japan!" the first of a series of films dealing with the allies and enemies of the United States, is scheduled for release May 15th by the Princeton Film Center, Princeton, N. J. It will be distributed nationally in both 35mm and 16mm form to theatres, Civilian Defense Councils, schools, industrial organizations and local governments. The film, produced by the Princeton Film Center in co-operation with the Institute of Pacific Relations, well-known authorities on Japan and the Orient, is a 1-reel sound-film and answers such questions as "How large is the Japanese Empire?" "What is Japan's military and naval strength?" "Is Japan self sufficient in raw materials?" "Can Japan win the war?" This and others in the series will be available for either rental or purchase. Inquiries should be addressed to the Princeton Film Center, 410 Nassau Street, Princeton, N. J.

3,000 See British Documentaries

Crofters in the windswept islands of the Hebrides and market gardners in the flower land of the Scilhes were among the 3,000,000 people in the British Isles who last year saw films shown by flying squads of mobile film units.

Sponsored by the British Ministry of Information, these 70 units, which will soon be 100, are known up and down the British Isles as the "Celluloid Circus." They travel thousands of miles through rural and urban Britain, making stands for the night and moving on next day.

Morning, noon or night, there is always an audience waiting for them. First come the school children to special films about the Empire and its Allies. In the afternoon, films about food and wartime housewifery are shown to Women's Institutes in the countryside and to townswomen's guilds in the towns. In the evening there may be a set-up for agricultural workers in a farm, and the day is rounded off with a "midnight matinee" between shifts at an armament factory.

These free shows, which usually last about 80 minutes, let people see how their own activities fit into the general picture of the nation at war. The new orator-film, moreover, has brought the public forum into the village and leads lively discussions of the country's problems.

Apart from these mobile units, M.O.I. and other films are available from the Central Film Library free of charge to any organization which has facilities for showing them. Between 5,000 and 6,000 films are sent out each month.

New Magnetic Recorder

Immediate playback is possible with a new magnetized-tape recorder—trade-named "Mirrophone"—just announced by Western Electric. Consisting of a compact amplifier-and-speaker cabinet and a microphone, as the illustration shows, the Mirrophone contains a continuous loop of metal tape, sufficient for a minute's recording. Sound is recorded on this tape magnetically, and reproduced the same way, as each new recording is made, the previous one is automatically erased as the tape is demagnetized.

Intended principally to provide a quick-playback method of rehearsing radio "commercials," voice- and speech-improvement, and the like, the Mirrophone should prove useful as well as a means of rehearsing narrators, and the like, in difficult parts of film-recording assignments.

Agfa-Ansco Centennial Booklet

Commemorating the firm's 100th Anniversary, the Agfa-Ansco Corporation has prepared for free distribution a generously-illustrated booklet which graphically presents the story of the origin and development of America's oldest photographic manufacturer. Prepared in chronological form, the booklet links the firm's progress with the advancement of photography in the United States during the past century. The significance of each date mentioned is discussed concisely, while numerous illustrations supplement the text in effectively pictorial form. Complimentary copies may be obtained by addressing the firm's Service Department, Binghamton, N. Y.

New Texas Film Library

National-Ideal Pictures, Inc., opening a new office in Dallas, Texas, is a combination of two previously well-known substandard distribution organizations, the well-known 16mm. Ideal Pictures Corp. (Bertram Willoughby) and the National 16mm. Film Libraries Co., of Texas. The combined set-up is stated to be the largest substandard film-library in the world, serving schools, clubs, churches and homes with both features and short-subjects—16mm. sound and silent, and 8mm. silent.

PHOTOGRAPHY: ITS SCIENCE AND PRACTICE, *by John R. Roebuck and Henry C. Staehle.* (D. Appleton-Century, $5.00.)

Good volumes have been written before this, expounding different aspects of the photographic science, but rare are the volumes that patiently lead the investigator through a continuity of the science as this volume does. It not only lays bare the theory upon which the science is based, but banishes from the mind the mysteries so many of the good volumes have failed to clear.

Enough historical data, from the inceptive discovery of photography to the present time, acquaints the student with the beginning and growth of the science without impeding his desire to delve into facts of deeper and recent discoveries.

The subject of emulsions is treated exhaustively, through all the stages of evolution, from the preparation of the gelatin; the light-sensitive content for the gelatin, microscopic grain study, and frequency curves of final sensitivity of the completed emulsion.

The chemistry of modern photo-science is interestingly discussed in the light of recent discoveries. The factual theory of the latent image is clearly set forth, dispelling at once the random guesses regarding its influence upon the ultimate result of the finished product.

Most interesting, and complete to the last minute of obtainable data, is the discussion on color photography and the physiological principle of its three-color vision: the reproduction of the colors of the visible spectrum by mixing in various degrees, light of the three primary colors, red, green and blue. The necessity of color separation is stressed, whether the separation be accomplished with single negatives, or whether the

proper ingredients for separation are incorporated by layers of separated color emulsion-dyes on a single base. A color chart included in this section gives the most completely graphic visualization we've yet seen of the usually perplexing questions of "additive" and "subtractive" color-printing.

The "one-shot" process of securing three separate negatives in one operation is interestingly discussed and graphically illustrated, together with discussions of the merits of the important color processes that have influenced the progress of perfected color-photography as we know it today.

The "subtractive" process, due to its commercial importance, is carefully discussed, as well as "wash-off relief," so closely associated in popular color technique, attracts absorbing interest, as does also the discussion of the Kodachrome process.

An interesting chapter, the "Laboratory Manual," is devoted to the technique required for the good quality that should stand out in every endeavor of serious photography. It contains all that can be desired by the earnest student inclined to follow patiently the experiments as set forth, pointing up the exact technique of photographic processing, from the installation of the individual darkroom, through to the completion of infra-red and ultra-violet photography. A.W.

Movie Clubs

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hold a 16mm. contest at its first May meeting, and an 8mm contest the second May meeting.

JOHN T. CHEDESTER, President.

"March of the Movies" for L. A. Cinema

High spot of the April meeting of the Los Angeles Cinema Club was a showing of a 16mm. print of Commodore J. Stuart Blackton's "March of the Movies," showing scenes and personalities of the very first movies up to date. Very timely also were 16mm. sound films of "Fighting the Fire-bomb," and an official British Government film on the London raids. Harry Parker showed a selection of Kodachrome slides, and Dr. F. F. Guerrieri a reel of excellent 8mm.

At this meeting Walter Evans, of the Los Angeles Civilian Defense Council, called for volunteers to aid in showing Defense Films. Since then Members Kenneth Forbes, Guy Haselton, William Hight, David Paige, Harry Parker, Ed Pyle and Mark Russek have been spending their spare time showing Defense Films to various meetings.

A. A. ANDERSON, President.

8-16's Sponsor A.R.P. Show

Recognizing the importance of Civilian Defense at this time, the 8-16 Movie Club of Philadelphia sponsored the showing of the official London Air Raid pictures and other Civilian Defense films at its April meeting, with all Air Raid Wardens as special guests, and the general public also invited. The Club is also initiating a movement to organize the Movie Clubs in the Eastern United States as a part of the Association of Amateur Movie Clubs sponsored by THE AMERICAN CINEMATOGRAPHER magazine. Plans are afoot to hold an inter-club contest between these eastern clubs as an initial activity of the new group.

FRANCIS HEININGER.

Title Demonstration in Utah

At the April meeting of the Utah Amateur Movie Club Wendell Taylor of the Technical Committee brought his titler and shot some titles at the meeting to demonstrate the proceedure of titling. The processed film will be shown at the next meeting. President Ted Geurts showed the first roll of black-and-white film which he shot, and he commented that when he began he made just as many mistakes as other beginners but by perseverance he has learned to take pictures which give him a great deal of satisfaction. L. Clyde Andersons "October By-Ways," which won the Color Award in the 1937 American Cinematographer Annual Contest, was again shown to the membership and delighted them with the fine October pictures.

To encourage the editing and titling of the odd and random shots a "Pot Shot Contest" was announced for the June meeting. We expect some ingenious entries in this contest.

JOHN HUEFNER, Secretary.

San Francisco on Skis

The Cinema Club of San Francisco held its regular monthly meeting April 21st in the club's quarters at the Women's City Club. As is our custom, many of the members and guests dined together just prior to the meeting using the facilities of the City Club. An honored guest was Walter Lenz, Photographic Editor of the San Francisco Examiner.

A talk on the correct use of the Weston Electric Meter by Herman E. Held of the Weston Electric Instrument Company was given. With the aid of illustrated slides, Mr. Held clearly indicated the proper use of the meter to obtain best results.

"San Francisco—A Story-book City," a 16mm. Kodachrome film by Clubmember Russel Hanlon was the first film shown. As is usual with Russ, nice exposure, superb composition, a steady tripod and judicious use of long and short focal-length lenses insured a swell job of filming.

An unannounced feature was the screening of the 16mm. Sound-on-film Kodachrome picture, "The Ski Chase." This film, obtained through the courtesy of the Union Pacific Railroad, depicted one of the many winter sports activities of famed Sun Valley Resort.

"Building a Bomber" and "Tanks," two timely 16mm. black-and-white films with S.O.F., produced by the Government's Office of Emergency Management and photographed by Carl Pryer, A.S.C., wound up the evening's entertainment.

L. J. DUGGAN, Secretary.

Club Federation

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suffering program committees of the clubs involved. I like the idea."

President Elmer Culbertson, of the Indianapolis Amateur Movie Club, President Robin Hadley, of the Long Beach (Cal.) Cinema Club, and President John Walter of the Los Angeles 8mm. Club are others who have assured support of the plan. The latter two clubs, incidentally, are already cooperating in providing an exchange program for forthcoming meetings of the Indianapolis and Tri-City clubs.

Clearly, the project is moving. If the officials of other clubs will cooperate with enthusiasm equal to that shown by these pioneers in the movement, America's Association of Amateur Movie Clubs can and will become a reality. Getting things established will call for work, films and enthusiasm—all of which America's amateur clubs have in abundance.

For our part, THE AMERICAN CINEMATOGRAPHER will cooperate to the full—and with no strings attached. We will gladly review and list any films available for inter-club exchange. To that list we add our own library of duplicates of the outstanding films which have won world-wide honors in this magazine's International Amateur Movie Contests. As the cooperation and demands warrant, this list, in printed or mimeographed form, can be made available to all participating clubs. Until such time as it may be wise to establish a seperate bulletin for this association, we offer the pages of THE AMERICAN CINEMATOGRAPHER to carry news, film listings and technical information for the association. And if enough clubs feel such a step would be helpful, we will undertake to prepare complete programs comprising both film and a prepared lecture discussing the films in detail, for use by participating clubs.

The future of the project, however, rests with the leaders of America's Amateur Movie Clubs. It seems to be a workable plan, and one that can be of lasting benefit to the clubs participating. We're ready to put our shoulders to the wheel. So, too, are the officers of the various clubs who already support the plan. It's too big an idea, though, for any one individual or group to dominate it. We need the cooperation of you and your club. HOW ABOUT IT? END.

"Sixth Sense"

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brought a natural ending to a film that had been unplanned only a few hours before. The scenes blended harmoniously, needing but a minimum of editing plus a few explanatory titles.

The exposure angle has not been stressed as it is taken for granted any reader of THE AMERICAN CINEMATOGRAPHER is familiar enough with his camera and exposure-meter, if he has one, to make all these basic adjustments quickly and accurately Making the most of conditions and filming as much in the proper sequence as possible will save a lot of time and bother You will find, as I did, it is not necessary to know far in advance what you intend to shoot in order to make a good movie END

Film Your "Victory Garden"

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runs out of food is as good as licked

Our country is not going to run out of food, nor will we allow hunger to knock out any of the nations united with us in our world-wide struggle Bread and meat, and milk are assured in reasonable abundance, but there are other items, chiefly the bulky, leafy vegetable, essential to a healthful diet, that may become harder to get, whether fresh or canned. England is not starving, yet fresh vegetables are said to command fantastic prices, compared to those we pay here. It is not that these essential vitamin-rich vegetables are hard or expensive to raise—they just take a lot of labor time, and their bulk and perishable nature puts an extra load on transportation facilities already taxed to the limit by urgent, direct war needs.

In this country we know that we can have our vegetables and other fresh green foods without ever being asked to pay five dollars for a single cucumber. For in the backyard kitchen garden we have found a way to whip the twin bugaboo of man-power and transport-space shortages. Within ten paces from its kitchen door, the average family can raise almost all the green food it needs throughout the summer, and some for home canning as well. All that is needed is a plot of fertile, well-drained land, perhaps 20x50 feet in size, a few tools, some seed, and the healthful spare-time work of taking care of the growing plants Such a plot is very properly called a "Victory Garden," for it adds to the Nation's food supply, provides healthful, fresh-air activity for indoor workers, and releases farm and industrial manpower (not to mention transport space) for war needs

And since, as a reader of THE AMERICAN CINEMATOGRAPHER, you're inevitably a movie-maker (even if not a garden addict!), you can give your Victory Garden project an excellent sugar-coating by making it the subject of some or all of that spring and summer filming (preferably in Kodachrome) that you mightn't do otherwise if you're conserving tires like the rest of us, or if you happen to live in a coastal "Combat Area" where so many of your pet peacetime filming subjects are now on the restricted list. Your own back yard (unless it actually overlooks defense works!) is still open for unrestricted filming!

My suggestion would be to begin by seeing Burdett's film on the subject, entitled "Garden for Victory," it's available for either rental or sale through Bell & Howell's Filmsound Library in several versions, both color and black-and-whites, silent and sound, for both 16mm. and 8mm projectors. See for yourself what he's done with Filmo and Kodachrome, with a few feet of ground and some growing vegetables for subjects. Then see if you can't "top" his efforts for yourself! Whether your film does or not is up to your own filming abilities But the vegetables you grow will be just as good eating—and fully as much contribution to the War Effort! And you'll benefit personally by gaining a lot of healthful, fresh-air exercise, and adding to your library a film that's probably a bit different from the usual run of travel and family pictures you've always made before END

Maurine

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is pleasing to the eye That is all one needs to know about the theory of composition

"When I advise photographers to go to the movie houses and study the closeups on the screen I am serious. I have never stopped doing it When I see something new and decidedly unusual and pleasing I go back to my studio and, with my sister Marjorie as my model, I start experimenting with my lighting arrangements until I suddenly see on the ground-glass of the camera the same effect I saw on the screen. I make a note of the lighting details, and when a subject comes along who looks like the type of the star so lighted, why I just light her that way, and everybody is happy.

"Don't try experimenting on your customers, though! Be sure you work out the lighting on a model. You should be such a master of your lighting that you do not tire your customer out while you experiment with setting your lights

"Now, get me right on this one point I do not advise that all a photographer do is copy the motion picture cameramen's work You can do that until you finally begin to get the feel of a new style in portraiture Then you'll find yourself doing the way the ace cinematographers do—studying each subject individually, and lighting him to suit those individual requirements But until you get that screen-closeup technique thoroughly implanted in your mind, you'd better be a copier, or else you'll just keep on turning out the same, static type of pictures so many other photographers do.

"The same plan works just as well with movies—amateur or professional, 16mm. or 8mm.—too If anything, rather better, for you're working in the same medium as the cinematographer whose work you study in the theatre The trouble with all too many movies—not only strictly amateur films, but pictures made by 16mm. professionals, as well—is that the people who make them seem to forget that they're making movies. When they photograph people under artificial lighting, instead of using a true movie lighting, which would give an illusion of natural roundness and an impression of life and animation, they simply set up enough lights to get the necessary exposure-values, without much apparent thought of what else lighting can do The result is generally an impression that you're looking at a mere reproduction of a person, rather than at a presentation of a personality

"Another thing I can't stress too much is the use of make-up I use it in all of my portraits—and as a result, scarcely any of my portrait negatives are ever retouched. All the retouching is done with make-up, before the picture is made. This of course is doubly important when you're really working with movies, rather than stills.

"My suggestion is that when you see a picture that's worth studying, see it at least twice. The first time through, no matter how interested you may be in the technique, you can't help being distracted by the story. But the second time you see it, you already know how the story comes out, so you can keep your mind completely on the technique, and really learn something."

That Maurine is apparently right in her ideas is pretty well proven by her own experience. Most people in the United States have seen photographs of Jane Russell, who had the starring role in Howard Hughes' still unreleased film, "The Outlaw." She's probably received more pictorial publicity than any other starlet whose first film has yet to reach the public. Well, it was because Howard Hughes saw one of Maurine's portraits of her that Jane Russell was picked for the role

Then Hughes sent every person being considered for parts in his picture to Maurine to be photographed. He made his selections from those portraits Furthermore, when he had his cast tentatively selected, he made motion picture tests of them with 16mm. camera and sound-equipment, as reported some months ago in THE AMERICAN CINEMATOGRAPHER And he engaged Maurine to direct the photography of most of these tests, so that she could put on film the quality she brought out in her portraits.

Testing Auricon Camera

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of the people present who had participated in the making of the Club's Defense Film an opportunity to appear and says a few words, we made long-shots as extreme as the combination of a 25mm. lens and 25 feet of floor-space would permit, three-shots, two-shots, medium-shots and both normal and extreme close-ups. We made them with absolutely no consideration of the factor of sound,

working with all of the freedom we would have expected shooting silent pictures with, say, a Cine-Special. Yet in every instance, the recording was satisfactory. The quality was good—by no means of Academy Award quality, perhaps, but fully intelligible in spite of the fact that with one exception our lens-fodder consisted of wholly untrained actors. In other words, good, commercial sound, actually a good deal better than some I've heard in commercial 16mm. pictures, and a very great deal better than most 16mm. reductions from a professionally-recorded 35mm. original.

Our method of working was to begin with a very rough outline of what we wanted to get over in any given scene—the people involved, and an idea, at least of the thoughts we wanted them to express. Then between us we worked up impromptu dialogue. There would follow one or two rehearsals, to get the actor accustomed to his lines, and to set the lighting, camera-manipulation and recording levels. Then we would shoot the scene—at a single take.

This method worked out very well. So well, in fact, that all of us would recommend it very strongly to any group not working from a very rigidly set dramatic scenario. For by it, we maintained a surprising degree of spontaneity and naturalness in spite of having no professional actors.

Exposures, incidentally, were metered with the writer's Norwood meter, which worked perfectly, since the Auricon camera, at the standard 24-frame sound speed, gives the 1/50th second exposure for which the Norwood is calibrated.

In one or two takes we experienced a slight hum in the sound equipment. This made itself easily evident through the monitoring head-set, and was traced to the lighting equipment. It was overcome by grounding the recording amplifier by reversing the polarity of the lamp which proved to be the noisy one, and by taking care that the cables powering the lamps did not lie across or otherwise in too-close proximity to the cables connecting the units of the recording system.

Another thing we learned was that some revision of directorial technique is advisable when you are using single-system recording. It fell to my lot to direct most of the scenes; being accustomed to 35mm. professional practice with double-system sound and professional cutters who can easily clip unwanted words and actions from the start and finish of sound and picture films, from force of habit I used the professional signals, saying "Camera," and "Action," as a signal for starting camera and action. But using a single-system set-up like this, with sound and picture permanently on the same film, 24 frames apart, it is a great deal better if you get in the habit of giving these signals in pantomime, rather than verbally. Then they don't have to be cut out of the film before you show the completed picture!

In the same way, we learn that it is necessary to allow plenty of time between throwing the starting-switch and commencing the action for the camera to get up to speed. Professionally, this is usually signalled by either a buzzer, or a verbal report from the sound-man that the equipment is up to speed. With the Auricon, it is a good idea to count slowly to yourself "one—two—three," to measure this interval. (A longer count won't hurt, nor will it waste enough film to worry about.) The reason for this is that whenever the camera stops, since the recording light of the variable-area recorder remains constantly on, the film that is standing in the sound-aperture is fogged, sometimes (if the camera stops long enough) well into the picture. Also, the camera may possibly stop with the shutter open, in which case the picture-frame is fogged, and the fogging often seeps over into the sound-track, as well. This results in a white-flashed frame on the picture, and a disturbing "pop" in the sound, at the points fogged. They can be cut out, of course, but unless sufficient time is allowed between the start or finish of the action and the beginning or end of the scene, cutting out these fogged frames will result in cutting out a bit of the sound-track or a bit of the picture (according to whether the cut is at the beginning or the end of a scene) with not only a jump in action or sound, but also throwing picture and sound momentarily out of sync.

With these exceptions, however, making synchronized talking pictures with the Auricon proved every bit as easy and as convenient as making silent ones with any good 16mm. camera. The results on the sound side were uniformly excellent; as a matter of fact, we learned that making recordings on this equipment using Type A Kodachrome seems almost automatically to present the sound at its best. And finally, there was the incomparable thrill of not only seeing your pictures—in full color—move, but hearing them talk—and talk very intelligibly—as well. Either for use by 16mm. professionals or by advanced amateurs, we can report the new Auricon as a thoroughly practical method of making your own 16mm. sound films. END

8mm Show

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a happy thought—line voltage drop! He rushed down to his office, picked up a voltmeter and a step-up transformer.

The trouble was uncovered by the voltmeter, which showed the line was only delivering 90 Volts. In consequence the efficiency of the projection was extremely low.

The step-up transformer was plugged into the line and the projectors were again hooked up, with the voltmeter in the circuit.

Results were astonishing as the line voltage was lifted by the transformer to 115 Volts, the rated light power. A further step-up to 125 Volts increased light-intensity to a point where extremely brilliant pictures were produced.

All problems had been solved and when the doors of the theatre were opened the following evening a milestone in the engineering of 8 millimeter filming was passed.

From the opening fanfare to the final "The End" the show was handled with dispatch and precision. Excited guests found themselves viewing for the first time a brilliant and sharp 8 millimeter public showing of theatrical magnitude, and their response to the efforts of members to entertain them was full compensation for the many hours that the committees had given to this "showcasing of their hobby." END

Set-Building

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ing. Next time you go to a movie, notice how much the professional cinematographer gains from playing with contrasting highlights and shadows at points where the set-wall has a little projection, or is recessed. You can get this sort of design just as easily as we do by simply making up a few special flats, of normal height but only one or two feet wide. With these, you can provide interesting little projections or recesses in what would otherwise be flat, uninteresting walls. And your cinematographer will thank you for giving him a chance to get more of an illusion of relief into his set-lighting.

Another trick you can use, especially where you are shooting at the door of a room, with a hallway or corridor beyond, is to use a pair of simple flats for your set, with the door between, and then a third flat beyond the door to suggest the opposite wall of the hallway. If the scene is in a hotel or some similar semi-public building, you can get an interesting lighting by simply casting on this back-wall a shadow-pattern, say from a potted plant, or even a high-backed chair. And if your scene calls for a shot shooting from one room across a hall and through the door of another room, you can do this with but three sets of flats—one to represent the wall and door of the near room, the second, to represent the door of the room across the hall, and the third—somewhat wider, and perhaps with a window, to represent the far wall of the distant room. Unless your script calls for them, you won't need the side-walls of either of the rooms. And if you do, nine times out of ten a single "wild" wall will do the trick.

Where you need them, you can often get standardized pillars and columns from millwork firms and especially from house-wreckers. For that matter, if you plan your shots carefully, you'll find you don't need a full column, but only the half-surface that shows to the camera. You'd be surprised how much "production value" you can get out of a

single column placed a few feet in front of a simple flat. With a chair and perhaps a potted palm, and of course the right type of floor-surface, you can suggest a corner of a grand ballroom!

Flats don't necessarily need to be literally flat. If you really want to be fancy, you can build flats with any kind of curved section you wish. This calls for a curved frame, and steaming the plywood until it can be bent to fit the curve of the frame. It's decidedly a more complicated job of carpentry than the ordinary flat, but it can be done, even by non-professionals. We do it all the time, and of course these stock curved sections, come in very handy in remodelling old sets and pieces of sets to get something apparently new.

We keep standard sections of stairways—long and short, straight and curved—and work them with flats into sets, too, for scenes that call for such things. This, I realize, is something a bit beyond the average non-theatrical filming group, but once you get started, you can imagine how helpful it is to have a good "library" of such stock set-pieces. In practically every studio, we build things like this for the big "A" pictures and then remodel and reuse them time and again in the less-expensive program pictures. Whether or not you recognize them when you see them in the "B's" depends upon how much the art director had to spend for remodelling them for use in the lesser films, and on how clever he is. Nine times out of ten you'll not recognize them.

In some studios, instead of building flats from plywood, they use very similar frames covered with muslin, which is porous to sound. This is very nice in theory, but in practice, especially in the hands of the non-professional, it's not so practical. the fabric walls require an extra lot of reinforcement to avoid having the walls ripple every time a character closes a door. Anyway, if you're shooting in sound (as I know some amateur groups making Defense Films are) and you have trouble with reverberation from the plywood walls, you can usually cure it by seeing that no two walls are parallel, so that the sound waves can't bounce from one to the other. It takes only a little angling to do this—so little the camera will seldom, if ever, detect it.

But muslin has its uses. If you want a "Citizen Kane" effect with roofed in sets, you can get it by using the same method "Citizen Kane's" art director did, and putting a muslin ceiling on your set. This, incidentally, permits a group that is shooting sound to place the microphone above the muslin ceiling and, lighting largely from the floor, to get almost entirely away from the problem of microphone-shadows.

In sets representing interiors, where you have windows, you run into the problem of suggesting (except in night-effects) something, at least, of what lies beyond the window. With 16mm equipment, you can't as a rule use the expedients used by the professional—huge painted or photographic "backings," projection process-shots, and the like. But by means of a few potted plants or tree-branches, and a flat painted to represent blue sky, with perhaps a bit of foreground, if needed, made from a roll of that green grass-rug stuff sporting-goods stores use in golfing window-displays (we use it, too) you can get a surprisingly acceptable effect.

If you build your set outdoors, and have a real view beyond the window, you run into a variety of photographic problems. If you rely on daylight to illuminate your set, you get a very unnatural lighting effect. If you cover the set in so that you can use artificial lighting, you run into photographic problems in exposure and color balancing. But these can be circumvented.

If you're shooting in black-and white, you can usually balance up the exposure values of your interior and the exterior as seen through the window by covering the window-pane with fairly deep yellow cellophane—about the color of a K-3 filter, and using enough layers of cellophane to build up the desired density to balance the exposure.

If you're shooting in Kodachrome, you will most likely be using "Type A" for your Photoflood-lit interior. With this film, the area seen through the window, and illuminated by daylight, will naturally photograph a decidedly bluish shade. You can get around this by either of two methods. For one, you can use regular "daylight" Kodachrome instead of Type A, and instead of the regular Photofloods, use the special blue-bulb Photofloods. This will balance your color-values fairly well. If you don't want to do this, try covering your windows with pinkish cellophane—as nearly as possible like the color of the "daylight" filter made for shooting Type A outdoors. Using Type A, which is suited to your Photoflood lighting on the set, this cellophane filtering in the windows will, with a bit of experimenting, balance up the color-values of the daylit portions of your shot so that you'll get at least an acceptable color-balance between the two parts of the scene.

Finally, remember that the greatest secret in professional set-building (and even more so in amateur use, where you've got to stretch a slim budget) is to make the fullest possible use of the camera's tremendous powers of suggestion. What you actually build doesn't matter nearly so much as what you make the camera see. After all, your actual set need extend only a few inches beyond the side-lines of your widest-angled long-shot (just enough to give a safe margin for finder parallax, etc.) to get over the impression you want. Any additional construction is virtually wasted, since it doesn't show up on the screen.

Don't forget, either, that your camera is an impressionist. You can fool it into seeing things that don't really exist, by means of cast shadow-patterns, full-size and even miniature front-pieces, and the like. The effect you get on the screen isn't determined by what your too-literal eye sees as you stand beside the camera (your eye has a far different angle from the lens, anyway) but by what the lens itself sees. If you make the lens see what you want it to, you'll get the right effect, regardless of whether or not it exists in reality.

So when you start the job of making a purposeful film, such as a Civil Defense instructional picture, begin your set-building in your script. Sketch out each scene and set-up—and then build in your actual sets only what is necessary to get those sketched onto the film. You'll find it will simplify your set-building problems more than anything else. And it will rob the problem of building sets of most of its terrors! END

Field Hints

(Continued from Page 199)

Many of our Military and Naval photographic units are likely to be working in the tropics—as in the South Seas, India, Burma, and eventually Java and similar places—and in such arctic and subarctic regions as Alaska, Iceland, and so on. Working in regions like these demands very special techniques to meet the unusual conditions encountered. You could write a whole book on tropical and arctic cinematography, but here are a few hints that will be helpful.

In the tropics, your twin enemies are heat and moisture. The heat softens your film, and the moisture makes it deteriorate. Keep your supply of fresh film always in its hermetically-sealed "tropical pack" cans until the last possible moment before shooting. Then take out only what you know you'll expose during the day's work. When transporting film in the tropics—either fresh supplies or film loaded for shooting—keep its containers out of the direct sunlight as much as possible.

If you're shooting a camera with outside magazines, like a Bell & Howell, Mitchell or Wall, make sun-covers which you can slip over the magazine to protect them. These covers are simply properly-shaped sacks made of heavy cloth. If conditions permit, light-colored cloth is better than dark fabric, as it reflects, rather than absorbs light. In regions where the heat is dry, rather than moist, you can use leather—but don't use leather for anything in a hot, moist climate such as you'll meet around Java or the South Seas, for the leather will sprout a growth of mildew overnight. (So will film!) For such conditions, camera-cases should never be leather, but either galvanized iron or some of the synthetic fabrics and plastics which are mildew-resisting.

Lighting and exposure are a big problem in tropical photography. The sun, generally speaking, is intensely bright, while the shadows are empty black. If you can, try and keep your action either

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entirely in the sun, or *entirely* in the shade, for you can't satisfactorily compromise between the two. You're bound to lose one or the other.

Reflectors—if conditions permit—help in closer shots. But you can't always carry reflectors when you're on field service. I found a very passable substitute, however, when I had to grab a scene in a hurry while making "Trader Horn" in the African bush. It's luckily a substitute that is handily available in most foreign parts, where gasoline usually comes in 5-gallon tins. I simply straightened out a couple of these tin cans, which made excellent "hard" reflectors. For "soft" reflectors, I appropriated the leading lady's bedsheets, which is a substitute you're not likely to find in an army in the field. Well, we used hers because she was the only one in the troupe who rated sheets!

Once you've exposed your film, dehydrate it and pack it as quickly as possible. You can dehydrate your film in a very simple desiccator consisting of an air-tight, light tight can just big enough to hold a few rolls of film. At the lower end of the can, fix a false bottom of screening or perforated sheet-metal. Beneath this place a pan of calcium chloride. This chemical absorbs moisture from the air. Leave your film in the desiccator overnight or longer, and the calcium chloride will absorb the moisture in the air, and also the surplus moisture in the film. The chemical can be dried for re-use by simply placing it in a hot oven for a while.

Then pack your film and seal it. Be sure and pack it in cans and black paper both of which are really dry. You can desiccate your packing materials with calcium chloride, but a simpler way to do is to simply put cans and black paper into an oven until they're thoroughly dry. You can easily tell when the paper is dry; normally, paper in the tropics is as limp as a wet dishrag. But when thoroughly dry, the paper will crackle when you handle it.

Don't make the mistake of carefully sealing well-desiccated film in cans and paper that aren't dry; the moisture in the packing is quite enough to spoil your film. Plenty of professional troupes have found this out, very much to their sorrow!

Finally, seal your film can so it is air-tight. The best way to do this is to apply adhesive tape, and then seal this thoroughly with paraffin or wax. If you do this, and have your film and its packing thoroughly desiccated, you'll find there's no reason to have your film shipped home in the ship's refrigerator room (if any). Just be sure, however, that it isn't stored too close to the heat of the boilers.

In the arctic regions, your problem is strictly that of cold. If you know you're going to such a locality at a season when it's cold (don't forget that the Alaskan summer can be as hot and damp as that of Minnesota!) begin by preparing your camera to operate at abnormally cold temperatures. Don't depend too much on laboratory "coldroom" tests. We tested all our equipment that way to temperatures down to 40 below—and then when we got to Alaska we found that things worked very differently in practice!

Take the camera completely apart, and get every bit of lubricating oil and grease out of the mechanism—including the lens-mounts. Replace this either with the special, low-temperature oils made for such purposes, or with the very finest grade of watch oil you can get. If you can't get these special lubricants, you'd better let your camera—especially the ball bearings—run completely dry. In the low temperatures, the contraction of the metal will be quite sufficient to increase clearances so this can be done. You may find, however, that the batteries which normally have enough power to keep your camera at speed won't do it in the cold, for their power, too, drops with the temperature. You can get special batteries that will work in these temperatures; or you can use extra batteries in series.

If your shooting is primarily exteriors, keep both cameras and film constantly at outdoor temperature. If you bring the camera indoors, where the air is warmer, moisture will condense on the cold metal, and especially on the cold glass of the lens. It will fog up your interior shots—and then when you take the camera out into the cold again, for more exteriors, it will freeze into ice, not only in the mechanism, but on the lens-surfaces, and you're likely to have no picture at all.

If you can, keep two separate outfits, and two separate film supplies, one for exteriors (kept at outdoor temperatures) and the other for interiors (kept at room-temperatures). If you can't do this, resign yourself to completely cleaning and drying cameras and lenses every time you go from indoor to out, or from out to in.

Working in arctic temperatures, you'll naturally wear heavy gloves or mittens most of the time. But you can't make precise adjustments with them on. So you'll find it a very good idea to wear a pair of thin silk gloves under these mittens. They'll permit you to make accurate adjustments, and at the same time keep your fingers from actual contact with the frigid metal. And if you ever stuck your finger or tongue against a bit of cold metal when you were a boy, you know that your skin, brought into contact with really cold metal, has an unpleasant tendency to adhere to the metal—and to stay there even when the rest of you moves away!

Shipping film from these excessively cold regions to more normal climes for development can be quite a problem. When we made "Eskimo" up in Alaska, we had a good deal of trouble from "static" flashes. These are a result of flashes of static electricity which crackle, like sparks from a cat's back, when the film is unwound. On the screen they look like momentary flashes of a spraggly tree trunk—usually right down the most important part of the frame.

We found the trouble came from extreme and perhaps repeated changes in temperature. Our film went to Seattle by air, and remained pretty cold during this part of the trip. Then in the express office and in the ram on the way to Hollywood, it was suddenly brought to normally warm room temperatures. But when we saw to it that the film was transported in a way that permitted it to change from the temperature of the Alaskan winter to that of California slowly and gradually, our trouble was gone.

Finally, remember that no matter how good a cameraman you may be when you're on your home grounds, when you get out into the foreign field you're likely to be working constantly under completely unfamiliar conditions of atmosphere and lighting. Working in the English climate, for instance, is very different from anything you'll encounter in the U.S.A. You'll meet entirely different conditions in the tropics, in Alaska, and almost everywhere you go.

Make it a point, in strange and distant locations, to ask the man who already lives there. You may not necessarily have to ask questions; just look up the local photographer—there's always one, I've found—and spend a little time getting acquainted. Look over his negatives and prints—especially outdoor shots—and indulge in a little pleasant photographic rag-chewing, and you'll probably get the tips you want in the process.

That's an idea I've found pays big dividends. The first thing I do when I reach an unfamiliar location is to get acquainted with the local picture-maker, and I soon find myself on the right track to beating the local atmospheric hazards.

As I say, there's nearly always someone who makes pictures, no matter where you go. He may not necessarily be a cinematographer, he may not even be a professional (some of these amateurs are as good as most professionals, anyway) but he knows the conditions of picture-taking in his locality. You'll find some exceedingly fine professional and amateur photographers in England, for instance. There are some crackerjack native cinematographers in India, all the way from Bombay to Calcutta. "Down under" in Australia, you'll find some excellent professionals, and some of the world's most capable amateurs, as well. If any of our camera crews get to Russia, they'll find many fine and friendly professional cinematographers there, too—surprisingly many who can and do read THE AMERICAN CINEMATOGRAPHER in its original English. Judged by those I and other members of the A.S.C. have met in our travels, you'll find them all eager to help you and cooperate with you, often in ways you wouldn't expect in such distant lands.

There are some uncommonly capable cinematographers in Germany and Japan, too, but at present, I fear they're not inclined to be quite so cooperative or friendly. However, by the time enough Yanks have landed so our military camera units can get to work, it's very likely indeed that even these gentry may have decided that cooperation isn't such a bad policy, after all! **END**

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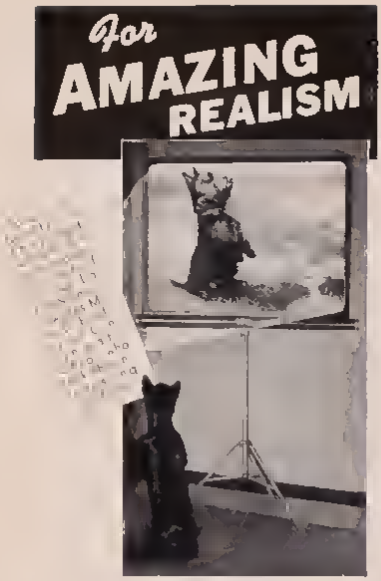

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Photography of the Month

(Continued from Page 209)

or film editor is somewhat at fault, for too frequently overly close angles are used on action which could be better told in long-shots, with possibly an occasional, brief close-up, but without the intermediate angles which are too often used.

THIS TIME FOR KEEPS

Metro-Goldwyn-Mayer Production.
Director of Photography—**Charles Lawton, A.S.C.**

Charles Lawton has done more impressive photographic jobs than this, but never any that were better suited to their vehicle. There's nothing to the story but lightly pleasant entertainment, and Lawton very wisely keeps his camera from trying to glamorize things, or to use tricks of lighting and composition to magnify the mood of what are actually mere young lovers' tiffs. It is in ordinary little pictures like this, however, that the amateur and the maker of commercial films can learn more about lighting than he can from the much more pretentious "A's," for in pictures like this, the cinematographer is working in sets closely keyed to reality, and is seeking to get over an impression of reality rather than any particular dramatic mood. From this viewpoint, "This Time For Keeps," like many another well-photographed program picture, is what we would call really profitable filmfare for the camera-minded—and diverting, as well.

TARZAN'S SECRET TREASURE

Metro Goldwyn-Mayer Production
Director of Photography—**Clyde De Vinna, A.S.C.**

Photographically as well as dramatically, MGM's "Tarzan" pictures are cast pretty well in the same mold. Clyde De Vinna's treatment of this one maintains excellently the pattern of visual pictorialism set by the earlier films in the series. However, we'll admit that we'd like to see one of these "Tarzan" epics done with more bona-fide exteriors (rather than studio-made ones, with real scenery, rather than painted backings, as a background for Tarzan's heroics) so that DeVinna's surpassing skill at pictorializing real exteriors could have full play.

The treatment of the climaxing action is an interesting piece of cutting, though we personally thought much of this action was too greatly undercranked to give the most convincing effect.

George Folsey

(Continued from Page 204)

boy or maybe just a fresh kid. And I still remember how grown-up I felt when one afternoon they told me off to take a taxi and escort Louise Huff—one of the reigning lovelies of 1914—to her Long Island home!

"I so earnestly wanted to make good with the Lasky Company that I tried to learn everything possible about what I was doing. I won't say I literally followed the example of the Admiralty Lord in 'Pinafore,' and 'cleaned the windows and swept the floor, and polished up the handle of the big front door'—but I came as close to it as possible. I learned how to run the elevator (as well as errands!), to operate the switchboard, and everything else I could think of to make myself indispensable.

"Finally there came an opportunity to go permanently out on the set as assistant to one of the cameramen. Assistant cameramen were a very new luxury in those pioneer days. Originally, the cameraman had to do all the work; but one day one of the Lasky 'aces' had an accident, and couldn't carry his camera. So he asked for—and got—an assistant. Soon, all the others demanded assistants, too, on the grounds that if *he* had one, they deserved one, too.

"Anyway, there I was, a full-fledged assistant cameraman. It was my first introduction to photography, and somehow I took to it instinctively. I'd hate to say how many nights I stayed at the studio helping my boss—or any other cameraman who happened to be working late—shoot titles, develop stills, make prints, check and repair cameras, and so on. I started making pictures on my own hook, too; bought a big 4x5 plate camera, and photographed everything I could think of—landscapes, portraits, still-lifes, and everything else—developing and printing my own pictures, and bringing the results to the various cameramen with whom I might be working for criticism.

"Oddly enough, that picture-making

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was the first thing that gave me any real standing in my own family. Up to then, I was just a kid brother, and treated as a sort of necessary evil. I couldn't do anything in particular; I wasn't particularly athletic (I was rather bookish, instead) so I wasn't particularly good at games, and I was both too young and too busy to have many social graces. But the fact that I could take good pictures (at least what seemed good ones then!) set me apart as someone who could really do something distinctive. And what a mystery I made of my work in the darkroom to my long-suffering family and friends!

"Anyway, I became a really good assistant cameraman. At least, for 1915 I was a good assistant when I look at the intricate job my assistant has today, making intricate follow-focus shots and being wholly responsible for the focus, making out complicated camera-reports, and maintaining one of today's much more complicated cameras, I'm not so sure that the assistant cameraman I was back in 1915 could cut the mustard on a 1942 set! Yet we *did* have one problem the average modern assistant doesn't have to consider: we often had to keep magazines containing film upon which we were making intricate multiple-exposure shots, with ten or a dozen precisely-matched takes on a single strip of negative, segregated until the last take was shot. I couldn't have been too bad, for I assisted some of the best men in the industry, including Arthur Miller, A.S.C., Al Liguori, and half-a-dozen other men whose names—tops then—are now forgotten.

"Finally, after about four years as an assistant, I was promoted to the then new position of second cameraman.

"I lasted less than two weeks on that job!

"The First Cameraman on that picture was a lean, cadaverous Frenchman, with the most sorrowful face I have ever seen. In comparison to him, John Carradine would look fat and well fed. He always went about enveloped in a long, flopping overcoat and an equally amazing temperament. Suddenly, right in the middle of the picture, he decided that he was going to go back to France immediately—and raise violets!

"There was the picture, less than half finished, and minus a First Cameraman. Trustingly, they came to me and asked if I thought I could finish it! With the confidence of a brash eighteen-year-old I said yes—and stepped into the most difficult assignment I have ever had.

"For it wasn't just an ordinary picture. The star, Alice Brady, played a dual role—and a difficult one. She not only had to talk to herself in the two characterizations, but to walk in all around herself, shake hands with herself, and even pin jewelry on herself. Today's great stand-bys—process photography and optical printing—weren't even invented yet, so I had to do the whole thing in the camera.

"Probably because I didn't know any better, I worked out a comparatively simple method of doing these scenes. Instead of using elaborate mattes, I used lighting. I did many of the takes on a set completely upholstered in black velvet, and kept this from photographing by simply keeping all light away from it, and concentrated solely on my actors. Using this for some takes, and an identical, normal set for the others, I managed to get what the script called for.

"For the rest, I guess I was lucky. I'd learned pretty well what was then known about photographing sets and people—and I was particularly in luck with my star, for Miss Brady was in love, and I don't think anyone could have made her photograph badly, she was so radiantly happy. At any rate, she was pleased with what I did, and so were the director and producer. I was a full-fledged First Cameraman from that day on.

"Since then, I've carried on, trying all the time to learn as much as I could from every source possible. One thing, for instance, has helped me in particular: the study of the technique of the great masters of painting. In motion pictures, you're working in a different medium, of course, you can call it an art, or not, as you prefer, but it's still visual storytelling, with the great addition of visual motion, both of viewpoint and of action. Yet you can still learn immensely by studying the lightings and compositions of the various great names of painting. Most of them, too, were trying to tell stories visually, and they had the time and the patience to analyze what they were doing more closely than most of us do today.

"As an example, take the picture I'm doing now. (We began it as 'Tulip Time,' but I think the present title is 'Seven Sisters.') It's a Dutch story, about a family of seven girls. With the locale and atmosphere of Holland to portray, I naturally turned for inspiration to a Dutch painter—Vermeer. But only for a key to my visual treatment; slavishly copying his paintings would be wrong, for he dealt with a different period, and had a different story to tell than I.

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Yet his work could—and did—guide me in my attempts to get over the visual impression of the Dutch scene.

"But don't jump to the conclusion that I feel I've completely hit the mark I was aiming for in working this way. I haven't; maybe I've peppered it around the outer edges here and there, but in this picture—as in most others—I'm painfully conscious how far short I fall of the goal I'm aiming at. If one out of every thousand people who see the picture can recognize even a trace of the Vermeer influence, I'll be happy—and surprised.

"I suppose that is an inherent weak point in the way we all have to make pictures today; we have to 'be commercial,' with all the accent on speed that this implies. In addition, making movies is never a one-man job, but an intensely collective one, with innumerable people on and off the set injecting their own ideas, personalities and temperaments into every scene. It's all but impossible to turn out really perfect creative, artistic work in a Times Square atmosphere with eight or ten people badgering you with sixteen or twenty loud-voiced hints, suggestions and demands at every turn of the camera. All the really great examples of cinematography, direction and acting have resulted from a rare and intangible combination of story, personalities and downright inspiration that somehow transforms the troupe momentarily from a mere group of individuals into a completely cooperative unit, working like one man to realize something that can only be defined as an inspirational ideal.

"As far as cinematography goes, I think it is a prime essential that the cinematographer approach his work in a spirit of complete honesty. If you like a thing, say so; if you don't, be equally frank about saying no. In the same way, if you can do something, don't hesitate to say so—and don't be any more hesitant to admit you can't do it if you feel you can't. As an example, if you are assigned to photograph a star, and find you can't do as good a job of bringing out that star's beauty or personality as some other cinematographer, for heaven's sake, say so! If you try to carry out the assignment regardless, by optimism or brute force, everyone's bound to suffer—your star's appearance and the picture will suffer from inferior presentation—and you'll suffer, too, because you turn out what other folks, at least, will regard as inferior work. Whereas if you have the courage to step aside and admit somebody else can do that particular job better than you can, everybody will benefit—the star will look better, the picture will probably be better, and your associates will think the better of you because you've had the guts to be on the level about your own work.

"Many amateurs have asked me how to get glamorous lighting-effects in their own home movies. To my mind, it's just a matter of applying common-sense, spiced with a bit of artistic feeling, to the problem of lighting.

"In a close shot of a person—man or woman—the first step is the key-light. Most amateurs don't diffuse their lighting enough; and a well-diffused key-light (which gives the effect of soft light coming from a source of large physical dimensions) nearly always gives the most flattering effect.

"Move this light around your subject, moving it from side to side and up and down until you find the angle from which it gives the most appealing result. That's the place for your key-light. The rest of the lighting—filler-light to relieve the shadows, 'kickers' to produce interesting little highlight accents on hair, eyes, and so on—will just naturally fall into place once you've found the right key-light treatment.

"Don't forget the use of shadows. You can mask off part of the key-light to produce interesting shadows on the subject's face, using the highlight to accentuate the best features, and soft shadows to subordinate other features. Decorative shadow-patterns on the backwall are just as important, but they must be perfectly coordinated with the lighting on the subject, so that the whole effect of the lighting is believeable. Above all, remember to keep all the lighting—highlights and shadows alike—soft. If you analyze any glamor close-up on the professional screen, you'll see that half the secret, at least, is maintaining a flattering softness throughout the lighting, no matter how much or how little optical diffusion may be used on the camera." END

Cartoon Production

(Continued from Page 203)

background music supplementing action, but music working *with* action.

Animated cartoons are a *caricature* of real-life actions and events, differing distinctly from live-action pictures which are a *dramatization* of the same. Music and caricatured action have always been inseparably linked, right up through the history of visual entertainment, starting way back in the gyrations of primitive tribal dances. The ballet with its terpsichorean interpretations of emotions and actions, caricatures real life rhythmically. If these exaggerations were to follow the indefinite tempo of real life, the effect would be silly rather than pleasing.

Live-action pictures have in many cases taken a cue from cartoons, and synchronized background-music to fit certain types of comedy actions. They admit it when they call this procedure "Mickey-Mousing." But in this case the music is composed *after* the action is shot. (Except in the case of ordinary dance routines, which do not come under the classification of dramatic action.) Cartoons have the jump on their live-action big brother in the use of music to work in perfect sync with action because of the absolute control possible over both of these elements.

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toon that hasn't music in it. About the only time you'll find a lack of music is under a loud sound-effects pattern, or a line of dialog, in which case the presence of more sound would simply muddy-up the track. But then again, the dramatic effect of certain types of dialog can be heightened by the proper punctuation of music. And often enough, orchestrations have been so arranged as to substitute for sound-effects.

The consideration given music in the planning and timing of a cartoon is of the highest. Many directors insist on a musician working in the room with them during the process of timing a picture. In fact, director's units at the Disney studio are called "music rooms." A good story-minded musician is worth his weight in aluminum and rubber. He can open up new possibilities in the staging of a piece of business by suggesting musical themes to work with the action. His music can tell the story almost as much as the action. You could take the orchestra track from a good cartoon, run it alone, and follow the story simply by the accents, pacing and dramatic coloring of the music itself.

The timing of a cartoon is based entirely on musical beats of varying tempos, according to the pace and speed of the action taking place. The choice of a musical tempo for a sequence of action depends upon the type of action. A fast chase will require a rapid musical beat; a sneak action, a slow tempo, and so on.

From the standpoint of their musical backgrounds, there are three distinct types of cartoons being produced today. In each, music plays a role of varying importance.

In the first type, music plays a part equal to the action in importance. It more or less sets the pace for the action, through the use of rhythm or dance sequences in telling the story. In planning the story, the music is given as much consideration as the action, and the musician will work hand in glove with the director during the timing of the story for animation. All action is designed to follow a definite musical beat throughout. The "Silly Symphony" cartoons fall into this category, being classed as "musicals." Action, for the most part, will compromise to music, in order to maintain a constant feeling of rhythm and tempo throughout the picture.

The second type of cartoon subordinates music to the action entirely. Here action is the first consideration in telling the story, and the music is written later to fit. In this type of picture, no attempt is made to make the music a predominant feature as in the Silly Symphony series. They employ no dance or rhythm sequences to supplement the story-telling. Most of the current Donald Duck, and Pluto cartoons, and the Goofy series on "How To Ride a Horse, etc." exemplify this type.

In the third type, music governs every factor of the cartoon; tempo, story and action. "Fantasia" is an example of this type, in which the complete orchestration is pre-scored in its final form before production. The story is designed to fit the music, and the animation timing is held to the rigid tempo of the pre-scored music.

In each of these types, the procedure of timing differs, but in general, the problems are the same. In all cases, the action is in the final analysis, patterned to a musical beat. The only difference, as can be seen, lies in the way this musical tempo is established.

It might be well to draw a distinction here between musical tempo and story tempo. Musical tempo means simply the beat of the music. Story tempo, or story pacing, implies the rate of the progressive story-points which build to the climax. There is absolutely no relationship between the two, because story tempo—or pacing, as we'd better call it to avoid confusion—is based entirely upon an intangible relationship of story ideas, one to another, arranged so as to maintain and build audience-interest. Musical tempo sometimes supplements story pacing, but cannot make up for the lack of it. No amount of fast action and fast music can revive the audience's interest in the progress of the story once it has lagged due to side-tracking business and lack of directness in presenting story points.

It is a big part of the director's problem when timing a picture to maintain a constantly building pace in the picture.

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A good director will accomplish this, knowingly or subconsciously, depending on his experience.

A "running reel" (mentioned in the first installment of this series) is a sure check on story pacing. The director will try and get one together as soon as possible, shooting the story sketches, and whatever working layouts the layoutman has had time so far to develop. The sketches and layouts are shot to the lengths indicated in the director's timing, and dialog and sound-effects tracks are organized to sync with the picture. This reel represents the full screen timing of the picture. Then, as the animation develops, it is cut into the picture reel in place of the story sketches and still layouts, and so, piece by piece, the completed picture is built.

If the picture is a "musical," a piano or organ track is recorded at an early stage of production preparation, to set the musical tempo of the picture, and to establish footages. But where there isn't any predetermined music to set tempos, the director has arbitrarily to choose the musical beats.

The choice of a musical tempo to fit the action depends on the character of the action—slow, fast, or indifferent. A table of standardized musical beats has been established for cartoon work, based on the relation of the frequency of the beats to the speed that film travels through the projector (24 frames per second). Thus, an "8 beat" means one beat every eight frames of film, a "12 beat," every twelve frames, and so on.

Most action can be laid out on musical beats ranging from a 6-beat, for very fast action, up through a 16-beat. Any of the intermediary beats—7, 8, 9, 10, 11, 12, 13, 14, 15—can be doubled or tripled to fit very slow action. For example, a slow sneak action is timed with the main accents every 32 frames. Thusly, each measure of music will be 32 frames long.

Where the choice of a beat is purely arbitrary, and not governed particularly by any set action, a "free beat" is chosen. This is usually either patterned at two 12-frame, or two 16-frame beats to each musical measure. Any combinations of either of these beats will fit most any action, slow or fast. 2-12's can become 4-6's, for fast stuff, or 4-12's, for slow actions. Free beat is most generally used in the second type of cartoon described above, in which the action is set first, then the music.

The standard of measurement in cartoons is film footage. More specifically, time in cartoons is not measured in seconds or minutes, but in terms of the amount of film that passes through the projector at the standard rate of 24 frames per second; 90 feet a minute. For example, directors think of timing an action according to film footage, and not in seconds. An action that takes six seconds to pantomime, will be indicated as a "nine foot" action, as it takes nine feet of film six seconds to be projected. In accordance with this, metronomes and stop-watches are marked off in film footage.

The timing of a picture is plotted on paper in the form of bar work sheets, which are ruled off into squares to indicate beats and bars, or measures of music. The length of each measure is marked according to the musical tempo. A record of every technical detail concerning the timing and footage of a picture is kept on these bar sheets. Scene cuts are indicated at the proper places. Dialog and sound effects tracks are indicated, each 'take' carefully marked down as to its starting and stopping point in relation to the measures. Everything is accurately spotted exactly where it will occur in the course of a picture's footage. The bar sheets are the director's bible, a master-record of the picture's progress.

Making out bar sheets generally involves a lot of detail and figure-work, and this job, along with a lot of the other more non-creative tasks concerned with directing, is taken over by the assistant director. He is a humble, earnest individual, somewhat in the same position as a second lieutenant in the army; recipient of all the grief jobs, and none of the glory. He is the trouble-shooter for the director's unit, and must know all the answers for everything concerned with the picture's progress through production. He is in a natural position to be a fall-guy, and is quite apt to be blamed for anything that might go wrong that can't be hung on someone else, no matter how far-removed the trouble might be from his own particular sphere of influence.

But it really isn't as bad as it all sounds. The assistant director's job is one of great responsibility. He has to coordinate all the many changes that constantly occur during production and see that they're carried out. One of his duties is to see to the recording of sound-effects; all the pops, squeaks, groans, rattles, crashes, gongs, etc., etc., in the picture. Sound-effects play an important part in the humor of a cartoon, particular emphasis being placed on getting sounds that are caricatures of the real thing as much as is the exaggerated action.

Most of the sound-effects are single sounds, but some of them follow a pattern of action, and must be recorded at the same tempo of the action. Since the

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action has already been timed out by the director and indicated on the bar sheets in relation to musical beats, all the sound-effects man need do is copy off the measures that fit the action, and write the pattern of the sound effect like a musical score, quarter-notes, half-notes, etc., indicating the main accents of the sound.

The sound-effects men, who are trained musicians, then record their sound to a definite musical beat, following the score to hit the accents in accordance with the pattern shown in the musical measures.

Many are the ingenious, Rube Goldberg-ish contraptions that have been devised by sound-effects men to obtain ordinary, every-day sounds. However, many sounds are best recorded from the actual source. In the early days, when microphones couldn't be depended upon for true fidelity of pickup, certain sounds were best recorded by artificial means. But present-day mikes reproduce just about what's taking place, so real water, for example, is used to back up a screen rainstorm instead of a lot of gravel rolling around inside a barrel. If a gasoline motor sound is needed, there's no call to use the old standby, a flock of syrup pitchers whose lids were flopped up and down in quick succession to approximate the sound of the exhaust. No, they drag a gas engine onto the sound stage and record it. And it sounds surprisingly like a gas engine, too!

Even thunder—recorded artificially by rattling pieces of sheet metal—has been provided by nature in many instances. And no longer can the wiseacres sit in the theater and say, "Aw, I know how they got that brake-screech. They dragged a cheese-grater across a drumhead!" Nope, wrong again, my friend. They set a mike up close to the street pavement, started a truck going, and slammed on the brakes. Result: a beautiful sound of tires screeching on pavement. One such sound-effect, originally recorded for the Silly Symphony, "Tortoise and the Hare," has been since used in every case where such a sound is needed. It's a good thing that this sound is safely recorded, for under present tire-famine conditions, the sound-effects man would probably resort to a cheese grater on a drumhead or something, rather than waste valuable rubber!

When the sound-effects are all recorded, the assistant director sees to it that they're cut into the sound reels in proper synchronization with the picture. The sound-effects track and dialog tracks are kept separate up until the final dubbing, when all tracks are combined. Consequently, a change of footage in the picture-reel during production must be followed through in like form in all the various sound reels, or else the whole works is thrown out of sync. The assistant is kept hopping to keep up with the footage changes, for no one bothers to tell anyone else when a scene length is altered, assuming that such information will reach the proper person via telepathy. But it's just one of the many crosses the aud. has to bear, so he merely sighs resignedly, figuring what the heck, it's a job.

Concurrent with the timing of the picture by the director, the layout-man will be planning the staging and setting. The layout-man functions much like the art-director in a live-action studio, with a little of the director's responsibility and that of the director of photography mixed in. He plans the exact pictorial locale of each scene, plans the size and movements of the characters, figures out all of the camera moves such as trucks (moving toward or back from a character), and pans (following a character along). He considers interesting ways to present the artistic side of a scene—special effects, atmosphere shots, interesting camera-angles, and so on.

The layout-man must be an all-around artist, being fully acquainted with perspective, rendering and architecture. A good sense of story, comedy and dramatic values is necessary in order to be able to stage the picture so that its pictorial side works in complete accord with the action. He must be able to draw anything in the way of props or backgrounds—modern, prehistoric or futuristic.

The story man usually takes a stab at staging the picture in regard to cuts, size of characters, set-ups and direction of action, but cannot spend the additional time necessary (and "spending time" is an apt phrase in cartoons, since time *is* money) to work out the finished pictorial effect of the picture. He's mainly concerned with presenting his ideas in the simplest, clearest and most direct form. If he were to worry too much about finished set-ups or the mechanics of production, it's likely that he'd be sidetracked from the story line.

But often enough, the cutting and staging as outlined on the story boards provides a good pattern pictorially as well as dramatically, and the layout-man's chief job is then to design practical, working setups for the animator. If he possesses good story sense, he can often add to the presentation of a piece of business by designing the staging in an interesting fashion, suggest an additional cut or closeup to point a gag, or work out atmospheric effects to supplement the mood of a scene; helping the story not only to read clearly, but interestingly as well.

Many considerations enter into the designing of a set-up in which a character's action is to take place. The set-up must be pleasing pictorially, yet be practical so that the animator can move his character around with ease and freedom. It must be designed so that the character will be of a practical size to animate. Very large figures, or very small ones, are difficult to handle. Likewise are characters that work in set-ups with the camera shooting up or down at them from an extreme angle. He must compromise constantly between

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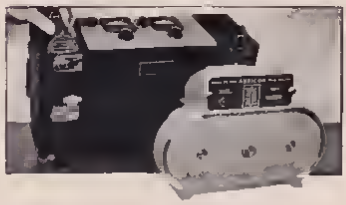

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At this point, a word might be put in to distinguish between the layout-man and the background artist. The background man's special job is to render up in color the finished background that the painted cels will work against and which will be photographed in Technicolor. He exercises no particular creative initiative, but follows the toned pencil sketch of the background prepared by the layout-man, reproducing it faithfully for size and set-up in water-colors or oils.

Illustrating this article is a simple, yet characteristic example of the progressive stages that a story idea goes through in production. The set-up sketch that the layout-man designed follows the first-hand suggestions of the story-sketch artist for direction of action, but improvements in the staging of the scene were instigated to add to the dramatic and pictorial effect.

First, the rough suggestions for the background were developed into a well-rendered forest scene. Then instead of keeping a close shot on the character, the camera was pulled back to a medium shot, with the purpose of stressing the smallness of the baby deer in relation to the huge forest around him, and to punch his problem in hopping over the large log.

The size of a character is governed only by his relationship to objects of a known size around him, and the best way to dramatize the littleness of the deer was to keep him small in the set-up. This is one example of the way the layout-man can help put across a story idea by the proper design of the setting.

The animator is provided with a tracing of the layout-man's background, along with a series of rough poses to indicate the exact path of action of a character, as well as careful indications for sizes and perspective. The position of the camera at the start and finish of the scene is also shown, established by the layout-man with an eye toward the best composition of the scene. The animator is free to move the camera around to suit the action of his character, but must maintain a good composition at all times.

The technicalities of camera moves in relation to the animator will be explained in more detail in the next installment of this series, which will deal with Animation.

Every procedure concerned with the production preparation of a picture is overlapped in order to move the story into animation as soon as possible. These procedures have been handled as separate phases in this article for the purpose of clearer explanation, but in actuality, they're all going on at the same time. While the director is timing the picture, the layout-man is busy developing the layouts, and the assistant director is organizing test reels and recording sound-effects. Then as soon as the story sketches have been translated into working set-ups, the director starts calling the animators in to pick up animation.

The animation of a picture might start at any point in the story, depending upon the layouts that have been completed, the dialog that has been already recorded and upon the availability of the animators themselves.

Animators are "cast" on pictures according to their individual aptitude for handling certain types of action or characters. Some animators are best handling personality animation, others specialize in action stuff. The Disney studio has animators who specialize on certain characters—"Duck men," "Pluto men," and so forth. With stock characters like Mickey, Donald and Pluto, who are used over and over again, such specialization is very desirable. The animator, in picture to picture, can work towards the improvement of a character in drawing and in the development of its personality, and this specialization also eliminates the need for an animator to "warm up" on unfamiliar characters every time he starts on a new picture.

The animator is usually familiar with the story, having attended at least one of the story meetings, but sometimes, just to be safe, the director will outline the complete continuity to him, and then concentrates on the sections that animator is to handle. This scene, or sequence of scenes, is explained in the minutest detail by the director who gives his conception and timing of the action. The animator will "play back" the action to the director, to insure that he has the intent and purpose of the scene firmly in mind, and also to suggest better timing and pantomime.

Between the two of them, they plot the exact course of the action on the layouts, and time it out, accounting for every action down to the last frame of film. If there's dialog in the scene, a print of the dialog is on hand to be run on a Moviola, accompanied by pantomime.

The director must also have a streak of the actor in his jack-of-all-trades makeup. He must have a feeling for all the basic fundamentals of pantomime. During the course of explaining action to the animator, he will often go through all sorts of gymnastics. He will crawl on the floor, stand on his hands, bark like a dog, grimace like an ape or wriggle in the fashion of a

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snake. A spectacle reserved only for a chosen few is the sight of a full-grown director down on his hands and knees, tongue hanging out: "Like this, see? I want to get a funny little fanny-wiggle on Pluto when he spots that bone and anticipates running for it, see?"

The director will set no absolute, ironclad rules for the performance of a character. He is fully cognizant of the animator's problems and knows that the final screen performance is decided down on the animator's drawing-board. Animators are highly creative draftsmen with definite ideas of their own about staging and pantomime. A good animator usually will uncover new action and performance possibilities, working close to the scene as he does, that could never be visualized by either the story man or the director.

So, in the interests of diplomacy and common-sense, the director will allow plenty of leeway to the animator in the handling of the action in order to stimulate any creative impulse which might otherwise be held in check.

Any controversy between the animator and director at this point will usually concern the timing of action, and not about any phase of the story. Each has had his chance to get in his crack at the story development, for by the time the story reaches its last meeting prior to production, it's "Speak now, or forever hold your peace!" The next chance to change anything will be when the first animation tests are looked at in the running reel.

Story revisions sometimes occur at this point, for the possibility of change and improvement is always present when working with a creative medium. But when the story is being handed out for animation, it is assumed that the continuity is set.

When the performance and staging of the action is agreed upon by the director and animator, they sit down and lay out the timing of the action on exposure sheets. These sheets are long pieces of paper ruled off horizontally to indicate frames of film and vertically into columns for action notes, "cel" levels, dialog, and camera instructions. These exposure sheets represent a complete chart of a scene's progress just as the director's bar-sheets keep tab on the overall picture, and serve to guide everyone concerned with the progressive technical steps of production; animator, in-betweener, checker, inker, painter, and cameraman.

(The next installment of this series will deal with the animator's problems—technical and artistic—in bringing a story to life through animation.)

Commandos

(Continued from Page 201)

den, I believe, used Super-XX all the time.

"Any way, there we were approaching the beach; I'd arranged with the naval man in command of the launch that I couldn't afford to step off into deep water because I mustn't wet my equipment. Finally we grounded, and after waiting for the troops to land, the naval man assured me we had made a dry landing, and, holding my cameras above my head, I took one step out of the launch on to a firm bit of rock.

"With all the smoke you couldn't see a yard, so I turned to call to Roy, took one more step and went wallop into the icy water right up to my waist! Luckily none of the equipment was damaged, but I myself of course was soaked right through, and the cloths I had put in my trousers' pockets for wiping the lenses if we got condensation were ruined. After an hour or so of strenuous activity my pyjama trousers began to dry, and my legs got a bit more comfortable, but my feet never got anything better than soggy and frozen.

"After wading ashore and getting some stuff of the troops landing, Headquarters was set up in a house near the beach and we set off with the advance parties. Roy, Harry and I kept together pretty well all the time, and later on Jack Ramsden joined us from Maaloy.

"It was a bit strange at first, as we couldn't see the enemy and didn't know what everybody was up to, but we soon got used to it and happily carried on shooting till we re-embarked about 2 30.

"There was a good deal of noise all the time, shells from the naval escort, mortars, dynamiting and gunfire, and a fair amount of bullets flying about—enough to make you run pretty hard when crossing any open space. But none of us had any very narrow escapes that we know of, though we did all jump when we saw an unexploded grenade lying in the snow and hurriedly tossed it into the sea.

"One thing that stuck in my mind was the troops finding a case of apples, which they opened and devoured as they went about the job (I was lucky enough to sample two). They were shiny green apples, like Newtons, each wrapped in

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crinkly paper and I wondered where they had come from

"After a bit the civilians began to venture out of their cellars, somewhat upset and scared, with the children shouting with excitement and some of the women crying quietly. Many of them gathered a few belongings together and went down to the beach to come to England, but nobody was asked to come who didn't volunteer

"We got some nice stuff of the civilians, but for fear of reprisals it had to be censored out of the newsreels (it was the only stuff censored). That shot of the notice saying "Photography Forbidden," which has amused people, was the idea of the information officer with us

"Well, so we carried on shooting till the re-embarkation signals went. My two Eyemos behaved very well; no condensation on the lenses, and though once or twice I thought they were running slow (as well they might have in that cold) everything turned out O.K. The only mishap was near the end, when, on rewinding one, a spring went (it was only the check spring though it felt and sounded like the main) the key flew out and caught a soldier smack across the nose no serious injuries fortunately Altogether the two of us shot 6,000 ft

"It was a rush for the labs (Kay's, West End) but they made a very good job of it The only trouble was that with 45 Eyemo spools, not to mention 8 cans from Jack to deal with, they had to work the bath for the Super-XX stuff and let the Plus-X take its chance, so the quality of the Plus-X could have been a little improved. However, it was all very pleasant, in retrospect at any rate, and the public seems to have enjoyed the results, so I hope we have another job like Vaagso to do as soon as possible" END

Professional 16mm

(Continued from Page 200)

by means of an electrical filter network, accurately simulates the final reproduction characteristics of the 16mm recording when played in a commercial 16mm sound-projector

For permanent studio installations, a rack and panel studio system is available which resembles in many ways its 35mm counterpart.

From the above description of the equipment available for professional 16mm film recording, it will be evident that the only limitations on what can be done with 16mm recording are the time, effort, ingenuity and money which the professional producer is willing to expend to get the result he wants Likewise, unsatisfactory results in 16mm recording are not the result of using 16mm film, but are generally traceable to a lack of sufficient equipment or skill in manipulating the equipment or improper processing of the film after exposure

Fortunately for the 16mm. producer, practically all of the equipment which is standard in 35mm editing is also available in 16mm. The Moviola Company, who have long been leaders in the design of equipment for 35mm editing, have brought out similar equipment for 16mm. editing including 2 or 4 reel differential rewinds, 2 or 4-way film synchronizers and the Moviola preview machine which is a duplicate of their 35mm. machine

It is the opinion of this writer that the equipment which Moviola makes is the best available anywhere today There are two very important considerations in choosing a 16mm film synchronizer 1. whether or not the machine holds the films so that there is absolutely no possibility of slipping, and 2, whether or not the machine itself scratches any part of the film area.

There is no question that 16mm originals, either negatives, reversals or Kodachromes, get considerably more handling than is customary with 35mm originals, so that equipment designed for handling 16mm. originals must be *absolutely* free of the possibility of scratching The film preview machines are designed for use with work-prints only, and are almost certain to scratch originals to such an extent that they cannot be used

The running of originals in any type of mechanical device, either projector, editor, Moviola preview machine or even a film viewer, cannot be recommended if consistently professional results are to be obtained It is best to make black-and-white work prints of all originals and work with these until the final stage of matching the originals to the work print is reached.

For non-sync editing, both the Bell and Howell "Filmotion Viewer" and the Craig "Projecto-Editor" are quite satisfactory editing devices and are considerably lower in cost than any of the Moviola viewers or preview machines.

Several splicers are available to the 16mm producer including the Craig, Griswold, De Brie and the Bell and Howell Professional machine splicer With all of these machines it is difficult, if not impossible, to make a splice in 16mm. negative which will not show on the screen Probably the best machines from this standpoint are the DeBrie and Griswold, but until some manufacturer develops a butt splice cutting the film on a bevel, 16mm splices will continue to be a big problem in professional production

In reversal and Kodachrome films it is not difficult to get an acceptable splice with most of the available machines This may be advanced as one of the advantages of producing in reversal or Kodachrome Another advantage of the reversal method over the negative-positive system is that all the splices are made in the reversal original, which is printed on a fine-grain duplicate negative which of course has no splices All of the final release-prints are then made from this duplicate negative which has no splices, and this reduces the likelihood of trouble in printing (To Be Continued).

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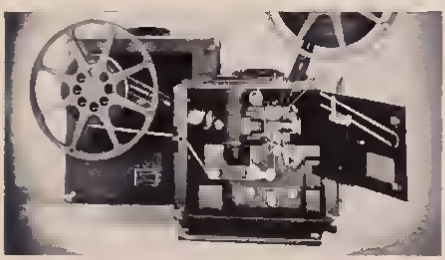

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